COMPARATIVE STUDY REPORT

ON

REQUIREMENTS FOR DISCLOSURE AND CLAIMS

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COMPARISON OUTLINE

COMPARATIVE STUDY OF PATENT PRACTICES ON REQUIREMENTS FOR DISCLOSURE AND CLAIMS

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		cosmetic inventions - Examination Guideline for biotechnology	
(3) Background and purpose of the statutory requirements for disclosure	o The object of Patent System is to encourage inventions by promoting their protection and utilization so as to contribute to the development of industry. (Article 1 of the Patent Act) o The Patent System promotes protection of inventions by granting a patent right or exclusive right under certain conditions for a certain period of time to those who have developed and disclosed new technology, while it gives the public an opportunity to gain access to the invention by disclosing technical details of the invention. The protection and utilization of an invention as	O The purpose of Patent Act is to encourage, protect and utilize inventions, thereby promoting the development of technology, and to contribute to the development of industry. (Article 1 of the Patent Act) The patent system is designed to promote the protection of an invention by granting the person who has invented and disclosed the new technology after the examination procedure and to contribute to industrial development by giving a third party the opportunity to utilize the invention. Such protection and utilization of the invention is realized by the specification serving not only	O The object of Patent system is to advance the exploitation of inventions-creations, enhance innovation capability, and promote the progress of science and technology. O The sufficient disclosure of the invention to the public is regarded as the counterpart for the temporary exclusive patent right granted in return to the applicant. O Full disclosure of the invention can increase the storehouse of public information available for further research and innovation.

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	described above are promoted through a description, claims and drawings (hereinafter referred to as "description, etc.") which serve both as a technical document disclosing technical details of an invention and as a document of title defining the technical scope of a patented invention accurately. Requirements for the statement of the "detailed explanation of the invention" in a description are provided under Article 36(4)(i), and requirements for the statement of the claims are provided under Article 36(5) and (6). Only a description, etc. that meets these requirements serves both as a technical document and as a document of title. (Examination Guidelines Part I Chapter 1. Section 1.)	as a title which specifies the scope of the invention, but as a technical document that discloses the technical matter of the invention. Article 42 of the Patent Act specifies the requirement of stating a detailed description of an invention and the scope of claims which consist of a specification for the role of a specification as a title and a technical document. (Examination Guidelines Part II. Chapter 2. Section 4.)	

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2. Description of the invention			.
(1) General, Matters to be stated in the description and their arrangement	o The description as provided in the preceding paragraph shall state the following: 1. the title of the invention; 2. a brief explanation of the drawing(s); and 3. a detailed explanation of the invention. (Article 36(3) of the Patent Act, Form 29) o The statement of the detailed explanation of the invention shall be clear and sufficient as to enable any person ordinarily skilled in the art to which the invention pertains to work the invention. (Article 36(4)(i) of the Patent Act) o The detailed explanation of the invention	o A patent application shall be accompanied by a specification stating the following matters, and necessary drawing(s) and abstract(s): 1. The title of an invention; 2. Brief description of the drawing(s) 3. Detailed description of the invention; 4. Scope of claims (Article 42(2) of the Patent Act.) o A specification attached to a patent application at the time of filing shall state the title of the invention, a brief description of the drawing(s), a detailed description of the invention and scope of claims according to	O The description shall set forth the invention in a manner sufficiently clear and complete so as to enable a person skilled in the art to carry out the invention or utility model.(Article 26.3) O The description of a patent application for invention shall state the title of the invention, which shall be the same as appears in the request. The description shall include the following parts: (1)technical field specifying the technical field to which the claimed technical solution pertains; (2)background art indicating the background art which can be regarded as useful for the understanding, searching, and examination of

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	shall state, in principle, "Technical Field", "Background Art", "Summary of Invention", "Technical Problem", "Solution to problem", "Advantageous Effects of Invention", "Brief Description of Drawings", "Description of Embodiments", "Example", "Industrial Applicability" is indicated in this order. (Form 29)	Article 42(2) of the Patent Act. If necessary, the scope of patent claims may not be disclosed at the time of filing an application. However, it shall be stated through amendment within the period under the latter sentence of Article 42(5) of the Patent Act. (Examination Guidelines Part II. Chapter 2. Section 4.) o In principle, the detailed description of the invention shall contain the following boxes: Technical Field, Background Art, Prior Art, Content of Invention, Detailed Content for Working of Invention, Industrial Applicability, Consignment Number and Sequence Listing Free Text. The content shall be clear and precise enough for a person skilled in the art to easily understand the invention and reproduce it through repetition. o In such a case, "the detailed description of the invention" refers to the rest of the description beside the title of the invention,	the invention, and when possible, citing the documents reflecting such art (3)contents of the invention the technical problem to be solved by the invention and the technical solution adopted to solve the problem; and stating, with reference to the prior art, the advantageous effects of the invention; (4)description of figures: where the description has appended drawings, briefly describing each figure in the drawings; and (5)specific mode for carrying out the invention (or utility model): describing in detail the preferable mode contemplated by the applicant for carrying out the invention; where appropriate, this shall be done in terms of examples, and with reference to the drawings, if any. (Rule 17)

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		the brief explanation of drawings (if the explanation of marks is disclosed, it shall be included) and the scope of patent claims, among all the items disclosed in the specification submitted by an applicant attached to the specification under Article 42(2) of the Patent Act. (Examination Guidelines Part II. Chapter 3. Section 3.2.)	
(2) Title of the invention	o The "Title of the Invention" should be such as to indicate concisely the invention concerned. (Form 29)	o The title of the invention disclosed in a specification shall be stated briefly and concisely based on the content of the invention as in the following: ① An ambiguous or wordy description of the invention shall be avoided and the name of the invention shall be stated briefly and concisely based on the content of the invention. (Examination Guidelines Part II. Chapter 2. Section 4.)	O The description of an application for a patent for invention shall state the title of the invention, which shall be the same as it appears in the request.(Rule 17.1) O The title of the invention shall be made in accordance with the following requirements: (1)the title of the invention in the description shall be the same as appears in the request. Normally a title shall contain no more than 25 Chinese characters; in particular cases, for example, for some applications in the field of chemistry, the title can be allowed to contain 40 Chinese characters at the most;

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			(2)it shall use technical terms generally adopted in the technical field to which the invention pertains, preferably technical terms used in the International Patent Classification, and non-technical terms shall not be used; (3) it shall clearly, concisely, and comprehensively reflect the subject matter and the kind (product or process)of the invention for which protection is sought so as to facilitate the classification of the application, and (4)the title shall not contain name of person, name of place, trademark, model, name of goods, or the like, nor shall it contain commercial advertising.(Examination Guidelines Part II Chapter II. Section 2.2.1)

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(3) Explanation of the invention			
(i) Technical field, industrial field of utilization	o As "technical field to which an invention pertains," an application shall state at least one technical field to which a claimed invention pertains. o However, the "technical field to which an invention pertains" is not required to be explicitly stated if a person skilled in the art can understand it without such explicit statements when taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing. o Further, in cases where an invention is deemed not to pertain to existing technical fields like an invention developed based on an	o The technical field of the invention for which patent protection is sought shall be stated clearly and briefly. If possible, related technical fields shall be disclosed, too. At least one technical field shall be indicated, but where a person skilled in the art can understand based on the technical knowledge without explicit description, the technical field need not be indicated. o Where an applicant knows the International Patent Code to which the invention belongs, the applicant may refer to the IPC. (Examination Guidelines Part II. Chapter 3. Section 3.2.1.)	O The technical field to which the technical solution for which protection is sought pertains should be specified.(Rule 17.1(1)) The technical field of an invention shall be the specific technical field to which the claimed technical solution of the invention pertains or is directly applied, rather than a general or adjacent technical field or the invention per se. The specific technical field usually relates to the lowest position in which the invention may be classified according to the International Patent Classification. (Examination Guidelines Part II Chapter II. Section 2.2.2)

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	entirely new conception which is completely different from prior art, an application for such an invention need not to state existing technical fields, and statements of the new technical field developed by the invention suffices the requirement. (Examination Guidelines Part I Chapter 1. Section 3.3.3 (1)①)		
(ii) Prior art, background art	o The statement of the detailed explanation of the invention shall provide the source of the information concerning the invention(s) known to the public through publication such as the name of the publication and others, where the person requesting the grant of a patent has knowledge of any invention(s) related to the said invention, that has been known to the public through publication at the time of filing of the patent application. (Article 36(4)(ii) of the Patent Act) o An applicant should state background prior art, as far as he/she knows, which is deemed to contribute to understanding the technical	o Background art refers to existing technology deemed to be beneficial in understanding technical implications of an invention and useful in prior art searches and examination. o Description requirements of background art are as follows: (1) Background art shall be related to an invention for which patent protection is sought. An invention for which patent protection is sought means an invention specified in the scope of claim. Whether background art is related to an invention for which patent protection is sought shall be determined based on consideration of	□ According to Article 22.5, the prior art means any technology known to the public before the date of filing in China or abroad. The prior art includes any technology which has been disclosed in publications in China or abroad, or has been publicly used or made known to the public by any other means in China or abroad, before the date of filing (or the priority date where priority is claimed). □ The part entitled with “Background art” in the description shall indicate the background art which can be regarded as useful for the understanding, searching, and examination of the invention, and when possible, cite the documents reflecting such

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	significance of the claimed invention and examination of patentability of the claimed invention because such statements of prior art could teach the problem to be solved and could substitute the statements of the problems. (Examination Guidelines Part I Chapter 1. Section 3.3.3 (3))	technical tasks of the invention, technical solutions and effects of the invention as a whole. (2) An applicant shall describe the background art of the claimed invention in detail in【Background Art】of detailed description of the Invention and, if possible, disclose information on prior art literature containing such background art. As for prior art literature, patent literature shall contain publication number and disclosure date whereas non-patent literature shall disclose name of author, name of the publication (thesis title), publisher and publication date. Even though only information on prior art literature is disclosed without the detailed description of background art, if the concerned prior art literature discloses proper background art relating to the invention, the background art of the invention shall be deemed to be disclosed. Where there exist multiple prior art documents, documents closest to the invention shall be disclosed.	art, especially the prior art documents which contain the technical features stated in the preamble portion of the independent claim of the invention, that is, the closest prior art documents.(Rule 17.1(2)) In the “Background art” part, the problems and defects existing in the background art shall also be objectively described; however, this requirement is limited only to the problem and defect to be solved by the technical solution of the invention.. (Examination Guidelines Part II Chapter II. Section 2.2.3)

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		(3) Where no available background art to an invention exists since it has been developed on novel ideas totally different from existing technology, disclosure of background art of the concerned invention can be replaced with disclosure of existing technology in the closest technical field or with the statement of the intent that no relevant background art can be found. (Examination Guidelines Part II. Chapter 3. Section 4.)	
(iii) Problems to be solved by the invention	o As "problem to be solved by the invention," an application shall state at least one technical problem to be solved by a claimed invention. o However, the "problem to be solved by the invention" is not required to be explicitly stated if a person skilled in the art can understand it without such an explicit statement, when taking into account the statements of the description and drawings, which include statements of prior art or advantageous effects of the invention, as well	o In the box for technical tasks to be solved, the issue of prior art which is the technical objective of the invention for which patent protection is sought shall be stated. o However, if a person skilled in the art can understand the technical tasks to be solved based on other descriptions in a specification and the technical knowledge without any explicit description, the content of the invention need not be disclosed. Also, when original technical tasks to be solved are not	O The technical problem to be solved by the invention refers to the technical problem existing in the prior art that the invention aims to solve. O The description of an application may contain one or more technical problems which the invention aims to solve, but meanwhile the technical solutions to solve these technical problems shall also be set forth in the description. (Examination Guidelines Part II Chapter II. Section 2.2.4)

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	as the common general knowledge as of the filing. (Note that a person skilled in the art could comprehend the problem when considering prior art which falls within the common general knowledge as of the filing.) o Further, in cases where an invention is deemed not based upon recognition of a problem to be solved like an invention developed based on an entirely new conception which is completely different from prior art or an invention which is based on a discovery resulting from trials and errors (e.g., chemical compounds), an application for such an invention is not required to state a problem to be solved. (Examination Guidelines Part I Chapter 1. Section 3.3.3 (1) ②) o "Statements of the detailed explanation of the invention which are to be in accordance with an ordinance of the Ministry of Economy, Trade and Industry under Article 36(4)(i) shall state the problem to be solved by the invention and its solution, or other matters	raised in the first place, like an invention created based on an idea totally different from prior art, the description of the technical issues is not necessary. (Examination Guidelines Part II. Chapter 3. Section 3.2.3.)	

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	necessary for a person having ordinary skill in the art to understand the technical significance of the invention." (Article 24-2 of the Regulations under the Patent Act)		
(iv) Means for solving a technical problem	o As "Means for solving a technical problem," an application shall explain how the problem has been solved by the claimed invention. o Also, in cases where a person skilled in the art would understand how the problem has been solved by a claimed invention by examining the claimed invention in light of the problem which has been found in the above-mentioned way, and taking into account the statement of a working example, an application for such an invention is not required an explicit statement of problem-solution form. o It is in connection with "a problem to be solved by the invention" that "its solution" is	o In the box for a means for solving the technical issues, the type of the means used to address the concerned technical shall be stated. In general, the invention for which patent protection is sought itself can become the means for solving the technical issues. However, where a person skilled in the art can sufficiently understand the process of solving the technical issues based on other descriptions of the specification such as the technical tasks to be solved and embodiment, etc., any means for solving the technical issues need not be stated. o Where original technical tasks to be solved	O In SIPO, "Means for solving a technical problem" is referred to "Technical means". . A technical solution is an aggregation of technical means applying the laws of nature to solve a technical problem. Usually, technical means are embodied as technical features.(Examination Guidelines Part II Chapter I. Section 2) O The following are examples of the circumstances in which the technical solution described in the description is regarded as unable to be carried out due to lack of technical means to solve the technical problem: (1)the description sets forth only a task and/or

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	meaningful. In another word, if one does not recognize a problem, one cannot recognize how an invention has solved a problem. (As opposed to this, if one can once recognize a problem, one might recognize how an invention has solved the problem.) Therefore, in cases where an invention is deemed not based upon recognition of a problem to be solved as mentioned above, an application for such an invention is not required to state how the invention has solved a problem (i.e., statements of solution). (It is needless to say, however, that even such an application is required sufficient disclosure meeting the enablement requirement.) (Examination Guidelines Part I Chapter 1. Section 3.3.3 (1) ②) o "Statements of the detailed explanation of the invention which are to be in accordance with an ordinance of the Ministry of Economy, Trade and Industry under Article 36(4)(i) shall state the problem to be solved by the invention and its solution, or other matters	are not raised in the first place, like an invention created based on an idea totally different from prior art, any means for solving the technical issues need not be stated. (Examination Guidelines Part II. Chapter 3. Section 3.2.3.)	an assumption, or simply expresses a wish and/or a result, providing no technical means that a person skilled in the art can implement; (2)the description sets forth a technical means,but the means is so ambiguous and vague that a person skilled in the art cannot concretely implement it according to the contents of the description; (3)the description sets forth a technical means, but a person skilled in the art cannot solve the technical problem of the invention by adopting said means; (4)the subject matter of an application is a technical solution consisting of several technical means, but one of the means cannot be implemented by a person skilled in the art according to the contents of the description; and O (5)the description sets forth a concrete technical solution but without experimental evidence, while the solution can only be established upon confirmation by experimental result. For example, in general,

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	necessary for a person having ordinary skill in the art to understand the technical significance of the invention." (Article 24-2 of the Regulations under the Patent Act)		the invention of a new use for a known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of enablement cannot be met.
(v) Working example	o "The mode for carrying out the invention" should be stated in terms of embodiments or working examples if they are needed in order to explain the invention in such a way that a person skilled in the art can carry out the invention. In cases where it is possible to explain the invention so as to enable a person skilled in the art to carry out the invention based on the statements of the description and drawings, as well as the common general knowledge as of the filing, neither embodiments nor working examples are necessary. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (5))		Embodiments are exemplification of the preferred modes for carrying out the invention. The number of embodiments shall be determined in accordance with the nature of the invention, the technical field to which the invention pertains, the state of the prior art, and the claimed extent of patent protection. (Examination Guidelines Part II Chapter II. Section 2.2.6)

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(a) What is a mode	o It is necessary to state in the detailed explanation of the invention at least one mode that an applicant considers to be the best (see, Note) among the "modes for carrying out the invention" showing how to carry out the claimed invention in compliance with the requirement in Article 36(4)(i). (Note)The "mode for carrying out the invention" referred to in this Guideline is the same as prescribed in the Regulation 5.1-(a)(v) under PCT (Patent Cooperation Treaty). Hereinafter it is accordingly referred to as the "mode for carrying out" as well. It would be noted that regarding a point to state what the applicant considers to be the best, it is not required as a requirement base on Article 36(4)(i). Therefore it does not constitute reasons for refusal even if it is clear that what an applicant considers to be the best has not been stated. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (1))	o As for the detailed content for working the invention, at least one detailed content for working the invention shall be stated, if possible, in various ways so that a person skilled in the art can easily figure out how to work the invention. In order to figure out how the invention is being worked, technical means for solving the issues needs to be stated. Where multiple technical means exist, how these means are connected to generate such superior effects shall be indicated. The detailed technical means itself shall be stated, not the mere function or effect of the means. o The detailed content for working the invention shall contain the composition of the invention as well as its functions. In fact, stating the function based on the technical field might be more appropriate than stating the composition of the invention in detail. For example, in the case of the computer field, stating what functions each technical means holds as well as how these means are connected to solve the technical tasks might	O The description shall describe in detail the preferred mode contemplated by the applicant for carrying out the invention. The preferred mode for carrying out the invention shall embody the technical solution adopted in the application for solving the technical problem, and shall also describe the technical features of the claims in detail so as to support the claims. O The preferred mode for carrying out the invention shall be described in such detail as to enable a person skilled in the art to carry out the invention. (Examination Guidelines Part II Chapter II. Section 2.2.6)

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		be more advantageous. o If necessary, the box for embodiments can be created and embodiments of how the invention can be actualized can be disclosed. As many embodiments as possible shall be stated. o Description of embodiments can be made as in the following manner: ① When the claims are disclosed comprehensively, each representative embodiment corresponding to the comprehensive description shall be stated, except for where a person skilled in the art can figure out the detailed content of the invention based on the description. ② Basic data, etc. shall be disclosed for embodiments and, if necessary, comparative embodiments and applied embodiments and so forth may be stated, too. Comparative embodiments shall be technically closest to the concerned invention and differences between embodiments, comparative	

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		embodiments and applied embodiments shall be specified. ③ Where embodiments are described by using drawings, marks of the corresponding section on the drawings shall be disclosed in brackets after the technical terms. o As for numerical limitation for certain technical means, the ground for limitation shall be disclosed. Also, where the claimed invention is explained by using experiment data, test methods, test/measurement tools and test conditions shall be disclosed in detail so that a person skilled in the art can easily reproduce the experiment results. o Where materials or devices hard to secure are used to work the invention, the manufacturing process or the source of securement shall be disclosed. o Standard terms or academic terms generally recognized in the technical field shall be used for technical terms. Chemical symbols,	

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		mathematical symbols and molecular formulas widely used in the technical field shall be pursued. o In presence of drawings, description of the drawings shall be stated. (Examination Guidelines Part II. Chapter 3. Section 3.2.4.)	
(b) Best mode contemplated by inventor	o Refer to (3) (v)(a) "What is a mode" above.		The description shall describe in detail the preferred mode contemplated by the applicant for carrying out the invention.(Examination Guidelines Part II Chapter II. Section 2.2.6). However, there is no requirement in Sipo to describe the best mode for performing the invention.

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(vi) Industrial applicability	o The main paragraph of Article 29 (1) of the Patent Act provides that any person who has made an industrially applicable invention may obtain a patent. o To state industrial applicability is not treated as a Ministerial Ordinance requirement. Industrial applicability is stated in case only it is unclear even if taking into account the characteristics of the invention or the description. Industrial applicability is obvious in many cases from the characteristics of the invention or the description, and in such a case, industrial applicability is not required to be explicitly stated. (Examination Guidelines Part I Chapter 1. Section 3.3.3 (4))	o Where it is hard to determine whether the claimed invention is industrially available, the method of industrial applicability, manufacturing method or utilization method shall be stated in the box for 〔Industrial Applicability〕. Since industrial applicability can be well inferred from other descriptions of the specification, additional description on industrial applicability may not be necessary. (Examination Guidelines Part II. Chapter3. Section 3.2.4.)	○ The examination of industrial applicability shall base on the entire technical contents disclosed in the description (including the drawings) and claims submitted on the date of filing, rather than merely the contents described in the claims.(Examination Guidelines Part II Chapter V. Section 3.1) ○ There is no requirement in SIPO to describe an “industrial applicability” part in the description.

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(vii) Advantageous effects or merits of the invention	o It is not required under the Ministerial ordinance requirement to state an advantageous effect of a claimed invention over the relevant prior art. However, it is an applicant's advantage to state an advantageous effect of a claimed invention over the relevant prior art because such advantageous effect, if any, is taken into account as a fact to support to affirmatively infer the existence of inventive step (Refer to Part Ⅱ, Chapter 2. 2.5(3)). Also, statements of advantageous effects could teach the problem to be solved and could substitute the statements of the problems to be solved. Therefore, an applicant should state an advantageous effect of a claimed invention over the relevant prior art, if any, as far as he/she knows. (Examination Guidelines Part I Chapter 1. Section 3.3.3 (3) ②)	o In the box for effects, particular effects of the invention for patent protection is sought recognized better compared to those of prior art shall be stated. Where superior effects of the claimed invention are disclosed in a specification, an applicant shall state such effects as far as the applicant knows since such effects can be recognized for confirmation of inventive step of the invention. (Examination Guidelines Part II. Chapter 3. Section 3.2.2.)	O The description shall clearly and objectively state the advantageous effects of the invention as compared with the prior art. (Examination Guidelines Part II Chapter II. Section 2.2.4) O Advantageous effects may be described by way of analysis of the structural features of the invention in combination with theoretical explanation, or illustrated with reference to experimental data, rather than by just assertion that the invention possesses the advantageous effects. (Examination Guidelines Part II Chapter II. Section 2.2.4)

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(4) Brief description of the drawings	o In the "Brief Explanation of the Drawings ", there should be given a description reading, for example, "Fig. 1 is a plane view, Fig. 2 is an elevation view, and Fig. 3 is a sectional view", and an explanation of the reference numerals or signs representing the essential parts of the drawings. (Form 29)	o In the box for the brief description of drawing(s), what each drawing indicates shall be stated as in the followings. (Example) 〔Brief description of drawing(s)〕 Drawing 1 is the ground view of the whole assembly of the invention. Drawing 2 is the front view of one side of the invention. Drawing 3 is the longitudinal section of one side of the invention. o Where a brief description of drawing(s) is inappropriate, it shall be handled as the case of the inappropriate title of the invention in the above-mentioned (3). (Examination Guidelines Part II. Chapter 2. Section 4.)	○ Where the description has appended drawings, it shall state the title of each figure in the drawings and briefly describe the contents as illustrated. Where there are many components or parts, the names of the specific components or parts in the drawings may be provided in the form of a list. Where there is more than one figure in the drawings, all of the figures shall be briefly described. (Examination Guidelines Part II Chapter II. Section 2.2.5)

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(5) Disclosure of the invention (means of solving the problems) - enablement requirement	○"The statement of the detailed explanation of the invention as provided in item (iii) of the preceding Paragraph shall comply with each of the following items: (i) …the statement shall be clear and sufficient as to enable any person ordinarily skilled in the art to which the invention pertains to work the invention" (Article 36(4)(i)). (Examination Guidelines Part I Chapter 1. Section 3.2) oTypes of Violation of Enablement Requirement ・Improper Statement of Modes for Carrying Out the Invention ・Part of Claim Not Supported by Mode for Carrying Out the Invention (Examination Guidelines Part I Chapter 1. Section 3.2.2)	o Detailed descriptions of an invention shall satisfy the following requirements: 1. Descriptions of an invention shall be provided in accordance with the methods prescribed by Ordinance of the Ministry of Knowledge Economy in a clear and detailed manner to ensure that any person with ordinary knowledge in the technology sector to which the relevant invention belongs can easily make an invention; 2. Technology used for the relevant innovation shall be stated. (Article 42(3) of the Patent Act)	o The following are examples of the circumstances in which the technical solution described in the description is regarded as unable to be carried out due to lack of technical means to solve the technical problem: (1) the description sets forth only a task and/or an assumption, or simply expresses a wish and/or a result, providing no technical means that a person skilled in the art can implement; (2) the description sets forth a technical means, but the means is so ambiguous and vague that a person skilled in the art cannot concretely implement it according to the contents of the description; (3)the description sets forth a technical means, but a person skilled in the art cannot solve the technical problem of the invention by adopting said means; (4) the subject matter of an application is a technical solution consisting of several technical means, but one of the means cannot be implemented by a person skilled in the art

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			according to the contents of the description; and (5)the description sets forth a concrete technical solution but without experimental evidence, while the solution can only be established upon confirmation by experimental result. For example, in general, the invention of a new use for a known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of enablement cannot be met. (Examination Guidelines Part II Chapter 2, Section 2.1.3)
(i) Basic concept in each category of invention			According to their nature, claims are divided into two basic kinds, namely, claims to a physical entity and claims to an activity, which are simply referred to as product claims and process claims respectively. (Examination Guidelines Part II Chapter 2, Section 3.1.1)

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(a) An invention of a product	o For an invention of a product, the definition of carrying out the invention is to make and use the product. Therefore, the "mode for carrying out the invention" also needs to be stated so as to enable a person skilled in the art to make and use the product. o "Invention of a product" should be clearly explained. To satisfy this requirement, it is necessary that an invention can be identified from one claim (i.e., the claimed invention can be identified) and can be understood from the statement of the detailed explanation of the invention. o For an invention of a product, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to make the product. For that purpose, the manufacturing method must be concretely stated, except the case where a person skilled in the art can manufacture the product based on the statements of the description and drawings, as well as the common general knowledge as of the filing. o For an invention of a product, the detailed	o Where a product invention is disclosed in claims, the detailed description of the invention shall contain the clear and full explanation on items allowing a person skilled in the art to produce the product. In general, to make manufacturing a product possible, the manufacturing process needs to be fully specified(Except for the case where the product can be manufactured based on the specification and drawings with the level of technology at the time of application filing even in absence of the description of the manufacturing process). Also, the concerned product needs to be fully grasped from the whole description of the detailed description of the invention and the roles and functions of each special technical feature that specifies the product shall be described together. o A product invention shall be fully described so that a person skilled in the art can use the product disclosed in the claims. In order for a product to be available for use, meaningful and specific usage of the product needs to be	Product claims include any physical entity (product, apparatus) that is produced by a person's technical skill. Claims to a physical entity include claims to articles, substances, materials, tools, apparatus, and equipment etc. (Examination Guidelines Part II Chapter 2, Section 3.1.1) o Regarding chemical field, SIPO has the specific guidelines for disclosure of a product invention. o Where the claimed invention is a chemical product itself,the description shall describe the identification,preparation and use of the chemical product. (Examination Guidelines Part II Chapter 10, Section 3.1) o As for a chemical product invention,the use and/or its technical effect of the product shall be completely disclosed.Even if the structure of the compound has been disclosed for the first time, at least one use of the compound shall be described. o If a person skilled in the art is unable,base on the prior art, to predict that the use and/or

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	explanation of the invention shall be stated so as to enable a person skilled in the art to use the product. To meet this, the way of using the product shall be concretely stated except where the product could be used by a person skilled in the art without such explicit statement based on the statements of the description and drawings, as well as the common general knowledge as of the filing. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (2))	described in a technical manner. However, it shall be an exception where, even without the description of use of the product, the product can be used based on the specification and drawings with the level of technology at the time of application filing. (Examination Guidelines Part II. Chapter 3. Section 2.3.1.)	its technical effect stated in the invention can be carried out,the description shall sufficiently provide qualitative or quantitative data of experimental tests for the person skilled in the art to be convinced that the technical solution of the invention enable the use to be carried out and/or the effect as expected to be achieved.
(b) An invention of a process	o For an invention of a process, the definition of carrying out the invention is to use the process as mentioned above. Therefore, a “mode for carrying out the invention” for an invention of a process also needs to be stated so as to enable a person skilled in the art to use the process. o ”Invention of a process” should be clearly explained. To satisfy this requirement, it is necessary that an invention can be identified from one claim (i.e., the claimed invention can be identified) and can be understood from the statement of the detailed explanation of the	o Where a process invention is disclosed in claims, the detailed description of the invention shall contain the clear and full explanation on items allowing a person skilled in the art to use the process. In general, to make using a process possible, the process needs to be fully grasped from the whole description of the detailed description of the invention and the roles and sequences of each step that specifies the process shall be described together. (Examination Guidelines Part II. Chapter 3. Section 2.3.1.)	Process claims includes any activity with element of time or process (process, use). Claims to an activity include claims to manufacturing processes, methods of use, communication methods, processing methods, and methods of applying a product for a specific purpose, etc. (Examination Guidelines Part II Chapter 2, Section 3.1.1) The specific guideline for a process invention in chemical fieldis: o The claim of the process invention in the field of chemistry, be it a process for

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	invention. o There are various types of process inventions other than those for manufacturing a product (so-called “pure process”) such as a process of using a product, a process for measuring or process for controlling, etc. For any type of process inventions, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to use the process based on the statements of the description and drawings, as well as the common general knowledge as of the filing. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (3))		preparing a substance or another process (e.g., method of application,process method or treatment method of a substance),may be defined by the features of the process relating to procedure,substance and apparatus. o The process features relating to procedure include process steps (it may also be reaction steps)and process conditions,such as temperature,pressure,time,catalysts or other auxiliaries used in process steps. o The process features relating to substance include the chemical component,chemical-structural formula, physical/chemical property parameters of the raw material used in the process and the product. o The process features relating to apparatus include the type of the apparatus specially adapted in said process and the property or function of the apparatus relating to said process invention. o In the case of a specific process claim,one of the three types of technical features may be selected depending on the subject matter claimed,the technical problem to be solved

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			and the substance or improvement of an invention. (Examination Guidelines Part II Chapter 10, Section 4.4) o (1)For a chemical process invention, regardless of a process for preparing a substance or any other process,the raw materials, procedures and processing conditions adopted in the process shall be described. If necessary,the effect of the process on the property of the title substance shall be described so as to enable a person skilled in the art,when carrying out the invention according to the process described in the description,to solve the problem which the invention is intended to solve. o (2)As for the raw materials used in the process, the components, property, manufacturing process or source of it shall be described in such a manner that a person skilled in the art can obtain it. (Examination Guidelines Part II Chapter 10, Section 3.2)

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- An invention for producing a product	o Where an invention of a process is directed to “a process for producing a product,” the definition of “the process can be used” means that the product can be produced by the process. Therefore, a “mode for carrying out the invention” for an invention of a process for producing a product also needs to be stated so as to enable a person skilled in the art to produce the product. o “Invention of a process for producing a product” should be clearly explained. To satisfy this requirement, it is necessary that an invention can be identified from one claim (i.e., the claimed invention can be identified) and can be understood from the statement of the detailed explanation of the invention. o For an invention of a process for producing a product, various types exist including a process for producing goods, a process for assembling a product, a method for processing a material, etc. Any of these consists of such three factors as i) starting materials, ii) process steps and iii) final products. For an invention of a process for producing a product,	o Where a manufacturing process invention is disclosed in claims, the detailed description of the invention shall contain the clear and full explanation on item allowing a person skilled in the art to produce a product with the manufacturing process. In general, to make manufacturing a product based on its manufacturing process possible, the manufacturing process itself needs to be fully grasped from the whole description of the detailed description of the invention and the roles and sequences of each step that specifies the manufacturing process shall be described together. o The manufacturing process of a product generally consists of a series of detailed steps dealing with raw materials. Therefore, raw materials for manufacturing the product and a series of the detailed steps shall be fully explained. Though not specifically described, the product manufactured through the concerned process shall be clearly described, except for the case where the product is easily	An invention for producing a product, which corresponds to manufacturing process, is also an invention of process. Regarding chemical field , the specific guidelines for disclosure of An invention for producing a product . Also see Examination Guidelines Part II Chapter 10, Section 3.2. o (1)For a chemical process for preparing a substance, the raw materials, procedures and processing conditions adopted in the process shall be described. If necessary, the effect of the process on the property of the title substance shall be described so as to enable a person skilled in the art,when carrying out the invention according to the process described in the description,to solve the problem which the invention is intended to solve. o (2)As for the raw materials used in the process, the components, property, manufacturing process or source of it shall be described in such a manner that a person skilled in the art can obtain it.

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	the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to produce the product by using the process. Thus, these three factors shall in principle be stated in such a manner that a person skilled in the art can produce the product based on the statements of the description and drawings, as well as the common general knowledge as of the filing. Of these three factors, however, the final products may be understood from statement of materials and process steps. (For instance, a process for assembling a simple device where structures of parts are not subject to any change during the process steps.) In such a case, statements on the final products may be omitted. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (4))	understood based on the raw materials or detailed manufacturing steps. (Examination Guidelines Part II. Chapter 3. Section 2.3.1.)	

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- An invention of use	o Also for inventions of a process of using a product , the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to use the process based on the statements of the description and drawings, as well as the common general knowledge as of the filing. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (3)) o Refer to 2.(5)(i)(b) “An invention of a process”above.		A use invention is an invention of process, and its claim is a process claim. (Examination Guidelines Part II Chapter 10, Section 4.5.1) Regarding chemical field, the specific guidelines for an invention of use. o The invention relating to the use of a chemical product is made on the basis of discovery of a new property of the product and the use of such property. Regardless of a new or known product, its property is inherent in the product per se. The essence of the use invention does not lie in the product per se,but in the application of its property. Hence,a use invention is an invention of process,and its claim is a process claim. (Examination Guidelines Part II Chapter 10, Section 4.5.1) o As for a use invention of a chemical product, the description shall describe the chemical product to be used, the method for using the product and the effect to be achieved to enable a person skilled in the art to carry it out. If

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			the product to be used is a new chemical product, the statement of the product in the description shall comply with relevant requirements in Section 3.1 of this Chapter. If a person skilled in the art cannot predict the use according to the prior art, the description shall sufficiently provide data of experimental tests for a person skilled in the art to be convinced that the product is useful for said use and can solve the technical problem or achieve the technical effect as ex-pected. (Examination Guidelines Part II Chapter 10, Section 3.3)
(ii) Amount of detail needed to satisfy the sufficiency of description requirement			

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(a) Functional vs. structural description	○Where a claim includes statements defining a product by its function or characteristics, etc. and where such function or characteristics, etc. are neither standard nor commonly used by a person skilled in the art, the detailed explanation of the invention shall state the definition of such function or characteristics, etc. or the method for testing or measuring such function or characteristics, etc. in order for the claimed invention to satisfy the enablement requirement for the claimed invention. In the technical field where it is difficult to predict the structure, etc. of a product from the function or characteristic, etc. of the product (e.g. chemical compounds), if a person skilled in the art cannot understand how to make another product defined by its function or characteristic, etc. other than products of which manufacturing method is concretely stated in the detailed explanation of the invention (or those which can be made from these products taking into account the common general knowledge), the statement of	o In order to figure out how the invention is being worked, technical means for solving the issues needs to be stated. Where multiple technical means exist, how these means are connected to generate such superior effects shall be indicated. The detailed technical means itself shall be stated, not the mere function or effect of the means. o The detailed content for working the invention shall contain the composition of the invention as well as its functions. In fact, stating the function based on the technical field might be more appropriate than stating the composition of the invention in detail. For example, in the case of the computer field, stating what functions each technical means holds as well as how these means are connected to solve the technical tasks might be more advantageous. (Examination Guidelines Part II. Chapter 3. Section 3.2.3.)	○ “An invention of a product” shall usually be defined in terms of the structural features of the product, and features of function or effect shall be avoided as far as possible to be used in defining the invention. It is only when a certain technical feature cannot be defined by a structural feature, or it is more appropriate to be defined by a feature of function or effect than by a structural feature, and the function or effect can be directly and affirmatively verified by experiments or operations as stated in the description or by customary means in the art, that definition by features of function or effect can be permissible. (Examination Guidelines Part II Chapter 2, section 3.2.1 and section 3.2.2)

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	the detailed explanation of the invention is violating the enablement requirement. (For example, where a person skilled in the art who intends to work the invention would have to make trials and errors, beyond the reasonably-expected extent.) (Examination Guidelines Part I Chapter 1. Section 3.2.1 (2)②) Where an invention of a product is not defined by such specific means as its structure but defined by its function or characteristics, etc., a specific means which is capable of performing the function or characteristics shall be explicitly stated in the detailed explanation of the invention, except where it could be understood by a person skilled in the art without such explicit statement based on the statements of the description and drawings, as well as the common general knowledge as of the filing. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (5))		

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(iii) Definition of "person skilled in the art"	o The term "a person having ordinary skill in the art to which the invention pertains" in Article 36 (4)(i) is considered to mean a person who has ability to use ordinary technical means for research and development (including comprehension of document, experimentation, analysis and manufacture) and to exercise ordinary creativity in the art to which the invention pertains. (Examination Guidelines Part I Chapter 1. Section 3.2 (1))	o 'A person with ordinary knowledge in the art to which the invention pertains' shall be deemed a technician with the average understanding in the technical field to which the application belongs(hereinafter referred to as a person skilled in the art). (Examination Guidelines Part II. Chapter 3. Section 2.1.)	O The term of "person skilled in the art" is defined in the "inventive step" part in Examination Guidelines: The person skilled in the art refers to a fictional "person" who is presumed to be aware of all the common technical knowledge and have access to all the technologies existing before the filing date or the priority date in the technical field to which the invention pertains, and have capacity to apply all the routine experimental means before that date. However, he is not presumed to have creativity. If the technical problem to be solved impels that person to seek technical means in other technical field, he should also be presumed to have access to the relevant prior art, common technical knowledge, and routine experimental means in the other technical field before the filing date or the priority date. (Examination Guidelines Part II Chapter 4, Section 2.4)

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(a) Whether the same as for inventive step	o The term "a person having ordinary skill in the art to which the invention pertains" in Article 29 (2) is considered to mean a person who have the common general knowledge of the inventions in the area as of the filing, are able to use ordinary technical means for research and development, are able to exercise ordinary creativity in selecting materials and changing designs, and are able to comprehend all technical matters for state of the arts technology in the field of the claimed inventions. In addition, a person skilled in the art is those who are able to comprehend all technical matters in the field relevant to problems to be solved by the inventions. Further, for some inventions, it is appropriate to consider these persons skilled in the arts to be a "team of experts" in several fields rather than individual person. (Examination Guidelines Part II Chapter 2. Section 2.2. (2))	o "A person skilled in the art to which the invention pertains" (referred to as "a person skilled in the art" hereinafter) refers to a hypothetical person who has common general knowledge in the art to which the claimed invention pertains and the ability to use ordinary technical means for research and development (including experiment, analysis, and manufacture); who has the ability to exercise ordinary creativity in selecting materials and changing designs; and who is able to comprehend based on his/her own knowledge all technical matters regarding the state of the art in the field to which a claimed invention pertains at the time of filing a patent application. In addition, an expert in the technical field is one able to comprehend based on his/her own knowledge all technical matters in the technological field relevant to a problem to be solved by the claimed invention. Therefore, it's not same as for inventive step. (Examination Guidelines Part III. Chapter 3. Section 3.2.)	○ It is indicated in Description Part in Examination Guidelines that " For the definition of the "person skilled in the art", Chapter 4, Section 2.4 of this Part shall apply". (Examination Guidelines Part II Chapter 2, Section 2.1) ○ Although the definition of " person skilled in the art" is the same as invention step, as for the circumstance of "the description fails to set forth clearly and completely the subject matters of the application so that a person skilled in the art cannot carry it out" it is not necessary for the examiner to make the search. (Examination Guidelines Part II Chapter 7, Section 10(4))

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(b) relevant art	In addition, a person skilled in the art is those who are able to comprehend all technical matters in the field relevant to problems to be solved by the inventions. (Examination Guidelines Part II Chapter 2. Section 2.2. (2))	In addition, an expert in the technical field is one able to comprehend based on his/her own knowledge all technical matters in the technological field relevant to a problem to be solved by the claimed invention. (Examination Guidelines Part III. Chapter 3. Section 3.2.)	○ The term of "relevant art" is described in Examination Guidelines as followed: For an invention, the examiner shall consider not only the technical field to which the invention belongs, but also the proximate or relevant technical fields, and those other technical fields in which the problem to be solved by the invention would prompt a person skilled in the art to look for technical means. (Examination Guidelines Part IV Chapter 6, Section 4(1))
(iv) Use of prior art in determining enablement	o This provision means that the detailed explanation of the invention shall be stated in such a manner that a person skilled in the art can carry out the claimed invention on the basis of statements of the description and drawings, as well as the common general knowledge as of the filing. (Examination Guidelines Part I Chapter 1. Section 3.2 (1)) o "The common general knowledge" refers to technologies generally known to a person	o In principle, the content of the invention includes technical tasks to be solved, a means for solving the technical issues and effects and shall be stated as in the following manner. (1) In the box for technical tasks to be solved, the issue of prior art which is the technical objective of the invention for which patent protection is sought shall be stated. However, if a person skilled in the art can understand the technical tasks to be solved	○ The description shall set forth the invention or utility model in a manner sufficiently clear and complete so as to enable a person skilled in the art to carry out the invention or utility model. (Article 26.3) ○ The description shall enable a person skilled in the art to carry out the invention. It means that the person skilled in the art can, in accordance with the contents of the description, carry out the technical solution of the invention, solve the technical problem, and achieve the expected technical

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	skilled in the art (including well-known or commonly used art) or matters clear from empirical rules. Therefore, the common general knowledge includes methods of experimentation, of analysis, of manufacture, and theories of a technology, etc., as far as they are generally known to a person skilled in the art. Whether or not a certain technical matter is generally known to a person skilled in the art should be determined based upon not only how many documents show the technical matter but also how much attention has been given to the technical matter by such a person. (Examination Guidelines Part I Chapter 1. Section 2.2.1.2 (3))	based on other descriptions in a specification and the technical knowledge without any explicit description, the content of the invention need not be disclosed. Also, when original technical tasks to be solved are not raised in the first place, like an invention created based on an idea totally different from prior art, the description of the technical issues is not necessary. (2) In the box for a means for solving the technical issues, the type of the means used to address the concerned technical shall be stated. In general, the invention for which patent protection is sought itself can become the means for solving the technical issues. However, where a person skilled in the art can sufficiently understand the process of solving the technical issues based on other descriptions of the specification such as the technical tasks to be solved and embodiment, etc., any means for solving the technical issues need not be stated. Where original technical tasks to be solved are not raised in	effects. (Examination Guidelines Part II Chapter 2, Section 2.1.3) ○ Whether the invention is enablement or not should be judged by person skilled in the art according to the records of description. That a person skilled in the art cannot obtain directly or solely from the prior art shall be described in the description. (Examination Guidelines Part II Chapter 2, Section 2.1.2) ○ The content that is used as background art can be added to the description. Those contents which are indispensable for the description to comply with the requirement of Article 26.3 cannot be described by only reference to other documents, but shall be substantially described in the description. (Examination Guidelines Part II Chapter 2, Section 2.2.6)

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		the first place, like an invention created based on an idea totally different from prior art, any means for solving the technical issues need not be stated. (3) In the box for effects, particular effects of the invention for patent protection is sought recognized better compared to those of prior art shall be stated. Where superior effects of the claimed invention are disclosed in a specification, an applicant shall state such effects as far as the applicant knows since such effects can be recognized for confirmation of inventive step of the invention. (Examination Guidelines Part II. Chapter 3. Section 3.2.2.)	

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(v) Incorporation by reference	o This provision means that the detailed explanation of the invention shall be stated in such a manner that a person who has ability to use ordinary technical means for research and development (including comprehension of document, experimentation, analysis and manufacture) and to exercise ordinary creativity in the art (a person skilled in the art) to which the invention pertains can carry out the claimed invention on the basis of statements of the description and drawings, as well as the common general knowledge as of the filing (hereinafter referred to as "enablement requirement"). (Examination Guidelines Part 1 Chapter 1.3.2 (1)) o The statement in the description should be written in colloquial style, and the whole invention has to be described in technically precise and concise manner from at the time of the original filing. In doing so, references to other documents should not be substituted for the statement in the description. (Form 29)	o There is no specific provision regarding incorporation by reference in Korean Patent Act. However, incorporation by the reference is not generally allowed. o Just adding the titles of prior art documents to a description shall not be deemed as addition of new matter. o However, an amendment based on the matters described in the prior art documents, or an amendment of adding matters which were originally referred to, but were only described in the prior art documents other than the original specification shall be deemed as addition of new matter when such added matters cannot be clearly understood to a person skilled in the art based on the specification, claims or drawing(s) originally attached to the patent application. (Examination Guideline Part IV. Chapter 2. Section 1.2.)	O The description could incorporate any prior art document, for those contents which are indispensable for the description to comply with the requirement of Article 26.3 cannot be described by only reference to other documents, but shall be substantially described in the description. (Examination Guidelines Part II Chapter 2, Section 2.2.6) O Citation of documents shall further comply with the following requirements: (1) the documents cited shall be publications, either in paper form, or in electronic form; (2) for non-patent documents and foreign patent documents, the publication date shall be earlier than the filing date of the application; for Chinese patent documents, the publication date shall be no later than the publication date of the application; and (3) where the cited document is a foreign patent or non-patent document, the source and relevant information of the cited document shall be indicated in the original language as used for its publication. If

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			necessary, Chinese translation thereof shall be provided, and put in parentheses. (Examination Guidelines Part II Chapter 2, Section 2.2.3) ○ For the application documents which contain the elements or parts incorporated by reference, where, at the time of going through the formalities for entering the national phase, the applicant indicates it in the entering statement and requests to amend the filing date for China, the elements or parts incorporated by reference can be retained in the application documents. The examiner shall redetermine the filing date in China based on the records in the Notification on Decision of Confirmation of Incorporation by Reference of Element or Part (Form PCT/RO/114) delivered by the International Bureau, and issue the Notification of Redetermination of the Filing Date. (Examination Guidelines Part III Chapter 1, Section 5.3)

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(vi) Risk of future "unenablement"	o When Trademarks are used for what can be indicated otherwise., there are some cases where the requirements under Patent Act Article 36(4) or (6) are not met. (Examination Guidelines Part 1 Chapter 1 Section 4. (4)) (Refer to 7(8) Trademark) Deposit and Furnishing of Microorganisms o When describing inventions involving a microorganism itself or a use for a novel microorganism, and when it is impossible to describe how to originate the microorganism so that the person skilled in the art can produce the microorganism, the microorganism must be deposited according to Section 27bis of Regulations under the Patent Act. (Examination Guidelines Part VII Chapter 2. Section 5.1)	o In principle, stating the trademark or name of a product is not allowed in a specification. However, even though the trademark or name of a product is disclosed, where the concerned product can be easily secured; the change in quality or composition of the product with the trademark and name is less likely to change the content of the invention, stating the trademark or name of the product shall be exceptionally allowed. (Examination Guidelines Part II. Chapter 3. Section 5.) o An applicant shall describe the claimed invention in a detailed description of an invention in a manner that a person with ordinary knowledge in the technology to which the invention pertains may easily work the invention. When a starting material or end product includes biological materials such as micro-organisms, there are many cases where an invention cannot be easily worked only based on the content of the specification. In such cases, in order for a person with	O Where the name of goods is inevitable in the description, the model, specification, function, and manufacturer of the same shall follow it. The description shall avoid defining a substance or product by use of a registered trademark. (Examination Guidelines Part II Chapter 2, 2.7(2)) O In general, the description shall sufficiently disclose in writing the invention for which the patent protection is sought. In the particular field of biotechnology, it is sometimes difficult to describe the specific feature of a biological material in writing, and the biological material per se cannot be made available even if there is such a description, hence, a person skilled in the art may remain unable to carry out the invention. Under this circumstance, in order to meet the requirements as set forth in Article 26.3, the biological material shall be deposited with a depositary institution designated by the State Intellectual Property Office according to relevant provisions. (Examination Guidelines Part II Chapter 10, 9.2.1(1))

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		ordinary knowledge in the technology to which the invention pertains to easily work the invention based on the content of the specification, a means of securing the starting material and a manufacturing process of the end product shall be disclosed in detail in the specification. In other words, the workability of the invention can be supported by depositing micro-organisms which are starting materials or end products. (Examination Guidelines Part II Chapter 6. Section 2)	
(vii) Disclosure requiring experimentation			

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(a) Reasonable experimentation	o This provision means that the detailed explanation of the invention shall be stated in such a manner that a person who has ability to use ordinary technical means for research and development (including comprehension of document, experimentation, analysis and manufacture) and to exercise ordinary creativity in the art (a person skilled in the art) to which the invention pertains can carry out the claimed invention on the basis of statements of the description and drawings, as well as the common general knowledge as of the filing (hereinafter referred to as "enablement requirement"). (Examination Guidelines Part 1 Chapter 1.3.2 (1)) o Therefore, if "a person skilled in the art" cannot understand how to carry out the invention on the basis of teachings in the statements of the description and drawings, as well as the common general knowledge as of the filing, then, such a detailed explanation of the invention should be deemed insufficient for enabling such a person to carry out the	o Where the claimed invention is explained by using experiment data, test methods, test/measurement tools and test conditions shall be disclosed in detail so that a person skilled in the art can easily reproduce the experiment results. (Examination Guidelines Part II. Chapter 3. Section 3.2.3.)	O The description sets forth a concrete technical solution but without experimental evidence, while the solution can only be established upon confirmation by experimental result. For example, in general, the invention of a new use for a known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of enablement cannot be met (Examination Guidelines Part II Chapter 2, Section 2.1.3(5)). O As for the property data showing the effect of the invention, the method used to measure it shall be specified when various measuring methods for it in the prior art yield different results. If it is a special method, it shall be explained in detail to enable a person skilled in the art to carry it out. (Examination Guidelines Part II Chapter 10, Section 3.1(3))

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	invention. For example, if a person skilled in the art who intends to work the invention would have to make trials and errors, beyond the reasonably-expected extent, such a detailed explanation of the invention should not be deemed sufficient. (Examination Guidelines Part I Chapter 1. Section 3.2 (2))		
(viii) How to make - availability of starting materials	oFor an invention of a product, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to make the product. For that purpose, the manufacturing method must be concretely stated, except the case where a person skilled in the art can manufacture the product based on the statements of the description and drawings, as well as the common general knowledge as of the filing. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (2) ②) oFor an invention of a process for producing a product, various types exist including a	o As for chemical substance invention, its embodiment shall include the detailed response conditions necessary for manufacturing the substance invention such as the starting material, temperature, pressure, inflow and outflow and the result of the direct experiment under such conditions. (Examination Guidelines Part II. Chapter 3. Section 2.3.2.)	O For a process invention, the embodiment or example shall describe the steps of the process, including technological conditions which may be expressed by different parameters or parameter ranges. (Examination Guidelines Part II Chapter 2, Section 2.2.6) O The description of a chemical product invention shall describe at least one preparation method and disclose the raw materials, procedures, conditions and specially adapted equipment used for carrying out the method so as to make it possible for a person skilled in the art to carry it out. In the case of a compound invention, the example of

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	process for producing goods, a process for assembling a product, a method for processing a material, etc. Any of these consists of such three factors as i) starting materials, ii) process steps and iii) final products. For an invention of a process for producing a product, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to produce the product by using the process. Thus, these three factors shall in principle be stated in such a manner that a person skilled in the art can produce the product based on the statements of the description and drawings, as well as the common general knowledge as of the filing. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (4) ②)		its preparation is usually required. (Examination Guidelines Part II Chapter 10, Section 3.1(2)) ○ As for the raw materials used in the process, the components, property, manufacturing process or source of it shall be described in such a manner that a person skilled in the art can obtain it. (Examination Guidelines Part II Chapter 10, Section 3.2(2))

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(ix) Taking into consideration of later submitted experimental data	o Upon receiving a notice of reasons for refusal due to violation of the enablement requirement, the applicant may make an argument or clarification by submitting a written opinion, certificate of experimental results, and the like. o The applicant may, in a written opinion, point out the common general knowledge as of the filing other than those taken into account by the examiner when making such determination, and argue that in light of such common general knowledge, the statement of the detailed explanation of the invention can be deemed to be clear and sufficient as to enable a person skilled in the art to work the claimed invention. The applicant may also submit a certificate of experimental results to support such argument presented in the written opinion. o However, if, due to a deficiency of the matters stated in the detailed explanation of the invention, the statement of the detailed explanation of the invention cannot be deemed to be clear and sufficient as to enable	o Where a written argument is submitted along with an amendment, an examiner shall review both of the argument and the amendment in depth and determine as to whether the notified grounds for rejection can be overcome or not based on such argument and amendment. Also, where only a written argument is submitted without an amendment, an examiner shall consider sufficiently an argument to determine as to the notified grounds for rejection can be overcome or not. o A written argument or other documents including experiment results in response to the notification of the grounds for rejection shall not be a part of the specification of the application. However, as these documents are submitted to clarify or verify the legitimacy of matters in the detailed description, an examiner may refer them to decide the patentability of the concerned application. (Examination Guidelines Part V. Chapter 3.	○ Whether or not the description is sufficiently disclosed is judged on the basis of the disclosure contained in the initial description and claims, any embodiment and experimental data submitted after the date of filing shall not be taken into consideration. (Examination Guidelines Part II Chapter 10, Section 3.4(2))

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	a person skilled in the art to work the claimed invention even in light of the common general knowledge as of the filing, the reasons for refusal cannot be overcome even when the applicant submits a certificate of experimental results after the filing to make up for such deficiency, thereby arguing that the statement is clear and sufficient. (Examination Guidelines Part I Chapter 1. Section 3.2.4)	Section 6.2.)	
(x) How to use - utility and operability	o For an invention of a product, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to use the product. To meet this, the way of using the product shall be concretely stated except where the product could be used by a person skilled in the art without such explicit statement based on the statements of the description and drawings, as well as the common general knowledge as of the filing. o Also, it is required to state how each matter to define the invention of the product works (role of each matter) (namely, "operation" of each matter) if a person skilled in the art	o Where it is hard to determine whether the claimed invention is industrially available, the method of industrial applicability, manufacturing method or utilization method shall be stated in the box for 〔Industrial Applicability〕. Since industrial applicability can be well inferred from other descriptions of the specification, additional description on industrial applicability may not be necessary. (Examination Guidelines Part II. Chapter 3. Section 3.2.4.)	O An invention for which a patent right may be granted shall be one that can solve a technical problem and can be put into practice. In other words, if the application relates to a product (subject matter for invention), the product shall be able to be made industrially and solve a technical problem; if it relates to a process (subject matter for invention only),the process shall be able to be used industrially and solve a technical problem. (Examination Guidelines Part II Chapter 5, Section 2)

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	needs it for using the product of an invention. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (2) ③) o In the case of inventions in technical fields where it is generally difficult to infer how to make and use a product on the basis of its structure (e.g., chemical compounds), normally one or more representative embodiments or working examples are necessary which enable a person skilled in the art to carry out the invention. Also, in the case of use inventions (e.g., medicine) using the characteristics of a product etc., the working examples supporting the use are usually required. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (5))		

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(xi) Proof of enablement	o Where the examiner makes a notice of reasons for refusal due to violation of enablement requirement under Article 36(4)(i), he/she shall identify the claim which violates the requirement, make clear that the ground of refusal is not a violation of the Ministerial Ordinance requirement but a violation of enablement requirement under Article 36(4)(i), and point out particular statements, if any, which mainly constitute the violation. The examiner shall explain the reason why he/she determines that the claimed invention fails to meet the enablement requirement, while showing the grounds for such determination (e.g. the part of the statement of the detailed explanation of the invention and the content of the common general knowledge as of the filing that he/she has taken into account when making the determination). The examiner is also required to set forth in the notice, to the extent possible, a clue for the applicant to understand the direction of an amendment that should be made in order to avoid the	o When an examiner intends to notify a ground for rejection citing the violation of the enablement requirement and description requirement of this chapter, any violation of such requirements shall be specified and notified. Especially, where a ground for rejection is to be notified based on the violation of enablement, the corresponding claims shall be specified. o Where a detailed description of the invention is made under Article 21(3) of the Enforcement Rules of the Patent Act, but the description is not clear and detailed enough for the invention disclosed in the claims to be easily worked, an examiner shall notify a ground for rejection only based on Article 42(3) of the Patent Act. o Where a detailed description of the invention does not satisfy both the enablement requirement and the description requirement, an examiner shall notify a ground for rejection based on Article 42(3) of	O The description shall clearly set forth the technical solution of the invention, describe in detail the specific modes for carrying out the invention, and entirely disclose the technical contents necessary for understanding and carrying out the invention, to such an extent that a person skilled in the art can carry out the invention. If the examiner can reasonably doubt that the invention does not meet the requirement of sufficient disclosure, he shall invite the applicant to make a clarification. (Examination Guidelines Part II Chapter 2, Section 2.1.3) O Whether or not the description is sufficiently disclosed is judged on the basis of the disclosure contained in the initial description and claims, any embodiment and experimental data submitted after the date of filing shall not be taken into consideration. (Examination Guidelines Part II Chapter 10, Section 3.4(2))

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	reasons for refusal (e.g. the required level of enablement). o It is recommended that the reason above should be supported by reference document. Such documents are, in principle, limited to those that are known to a person skilled in the art as of the filing. However, descriptions of later applications, certificates of experimental result, written oppositions to the grant of a patent, and written opinions submitted by the applicant for another application etc. can be referred to for the purpose of pointing out that the violation stems from the statements of the description or drawings being inconsistent with a fact generally accepted as scientifically or technically correct by a person skilled in the art. (Examination Guidelines Part I Chapter 1. Section 3.2.3 (1)) o Upon receiving a notice of reasons for refusal due to violation of the enablement requirement, the applicant may make an	the Patent Act and Article 21(3) of the Enforcement Rules of the Patent Act. (Examination Guidelines Part II. Chapter 3. Section 6.)	

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	argument or clarification by submitting a written opinion, certificate of experimental results, and the like. o The applicant may, in a written opinion, point out the common general knowledge as of the filing other than those taken into account by the examiner when making such determination, and argue that in light of such common general knowledge, the statement of the detailed explanation of the invention can be deemed to be clear and sufficient as to enable a person skilled in the art to work the claimed invention. The applicant may also submit a certificate of experimental results to support such argument presented in the written opinion. (Examination Guidelines Part I Chapter 1. Section 3.2.4)		

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(xii) Others	oAt least one mode for carrying out the invention needs to be stated in terms of "claimed invention," but the mode for carrying out the invention is not needed for all the embodiments or alternatives included within the claimed invention. However, if the examiner can suppose the other specific example which can be included in the claimed invention and can show well-founded reasons that a person skilled in the art would be unable to carry it out even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, then, the detailed explanation of the invention cannot be deemed to be stated clearly and sufficiently as to enable a person skilled in the art to work the invention. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (6)①)		O The following is a example of the circumstances in which the technical solution described in the description is regarded as unable to be carried out due to lack of technical means to solve the technical problem: (5) The description sets forth a concrete technical solution but without experimental evidence, while the solution can only be established upon confirmation by experimental result. For example, in general, the invention of a new use for a known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of enablement cannot be met. (Examination Guidelines Part II Chapter 2, Section 2.1.3(5))

COMPARATIVE STUDY OF PATENT PRACTICES ON REQUIREMENTS FOR DISCLOSURE AND CLAIMS

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3. Claims			
(1) General	o The scope of claims shall state a claim or claims and state for each claim all matters necessary to specify the invention for which an applicant requests the grant of a patent. In such case, an invention specified by a statement in one claim may be the same invention specified by a statement in another claim. (Article 36 (5) of the Patent Act) o The statement of the scope of claims shall comply with each of the following items: (i) the invention for which a patent is sought is stated in the detailed explanation of the invention; (ii) the invention for which a patent is sought	o Description of scope of claims holds significance in that the scope of protection of a patent right is determined based on the description. Where scope of claims does not meet the description requirement, the right of a third party can be unfairly limited due to the patent right. A patent holder, too, can face disadvantages such as invalidation of a patent right or unnecessary limitation on the scope of protection of a patent right. Therefore, when examining the description requirement of the scope of claims, an examiner shall be mindful of the description. o Items disclosed as claims are those that an	O The claims shall be supported by the description and shall define the extent of the patent protection sought for in a clear and concise manner. (Article 26.4) O The extent of protection of the patent right for invention shall be determined by the terms of the claims. The description and the appended drawings may be used to interpret the content of the claims. (Article 59.1) O The claims shall specify the technical features of the invention and the technical features may be either component elements that constitute the technical solution of the invention ,or the interrelations between the elements. (Rule 19.1, Examination Guidelines

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	is clear; (iii) the statement for each claim is concise; and (iv) the statement is composed in accordance with Ordinance of the Ministry of Economy, Trade and Industry. (Article 36 (6) of the Patent Act) o Statements of the claim under Article 36(6)(iv) of the Patent Act which are to be in accordance with the Ordinance of the Ministry of Economy, Trade and Industry shall be as provided in each of the following items: (i) for each claim, the statements shall start on a new line with one number being assigned thereto; (ii) claims shall be numbered consecutively; (iii) in the statements in a claim, reference to other claims shall be made by the numbers assigned thereto; (iv) when a claim refers to another claim, the claim shall not precede the other claim to which it refers.	applicant selects among the inventions disclosed in a detailed description of the invention and discloses as items for which patent protection is sought at his/her will according to the description method of the scope of claims under Article 42(4) and (8) of the Patent Act. Therefore, the recognition of the invention for which patent protection is sought shall be made based on the description disclosed in each of the claims in consideration of the content of the claims selected at the applicant's will. A detailed description of the invention or description in drawings shall be referred to only when the description of claims is unclear or the definition and content of the technical terms are ambiguous. The invention disclosed in claims cannot be recognized based on the content of the detailed description of the invention out of the description of the scope of claims. o Also, since an abstract is used for technical information, it cannot be used to decide the	Part II Chapter 2, Section 3)

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	(Article 24-3 of Regulations under the Patent Act, Form 29-2) o The technical scope of a patented invention shall be determined based upon the statements in the scope of claims attached to the application. (Article 70 (1) of the Patent Act) o In the case of the preceding paragraph, the meaning of each term used in the scope of claims shall be interpreted in consideration of the statements in the description and drawings attached to the application. (Article 70 (2) of the Patent Act)	protection scope of the invention. (Examination Guidelines Part II. Chapter 4. Section 2.) Article 42 of the Patent Act (Patent Application) ④ The scope of claims under paragraph(2)4 shall describe the matter for which protection is sought in one or more claims (hereinafter referred to as “claims”) and the claims shall fall under any of the following subparagraphs: 1. The claims shall be supported by detailed description of the invention; 2. The claims shall define the invention clearly and in detail; 3. Deleted. ⑤ When filing a patent application, any patent application may attach the specification not stating the scope of claims under paragraph (2)4 to the patent application, notwithstanding paragraph (2). In such cases, the specification shall be amended so as to state the claims within the period classified under the following	

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		subparagraphs: 1. Until one and half years since the day falling under any subparagraph of Article 64(1); 2. Until three months since the day of receiving the notification of the purport of a request of examination of patent application under the provisions of Article 60(3) within the period set forth in subparagraph 1 (until one and a half years since the day falling under any subparagraph of Article 64(1), if such notification was received after one year and three months from the day falling under any subparagraph of the same paragraph). ⑥ The scope of claims under paragraph (2)4 shall state such matters regarded necessary to specify an invention as structures, methods, functions and materials or combination thereof to clarify what to be protected. ⑦ Where a patent applicant fails to amend the specification until the period set forth in each subparagraph of paragraph (5) after filing an application, the application	

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		concerned shall be deemed withdrawn on the day after the period expires. ⑧ Details concerning how to enter the scope of claims under paragraph (2)4 shall be prescribed by Presidential Decree. Article 97 of Patent Act (Scope of Protection of Patented Invention) The scope of protection conferred by a patented invention shall be determined by the subject matters described in the claims.	
(2) Claiming format			

COMPARATIVE STUDY OF PATENT PRACTICES ON REQUIREMENTS FOR DISCLOSURE AND CLAIMS

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(i) Number of claims	o Claims are not limited in number, provided that requirements for unity of invention are met.	o Claims are not limited in number, provided that requirements for unity of inventions are met. (1) The claim shall be entered in a proper number according to the nature of the invention. .3 (Article 5(2) of the Enforcement Decree of the Patent Act) This provision shall be separately treated from Scope of Patent Application of Article 45 of the Patent Act. Cases where the claims are not entered in a proper number include ① where more than two inventions from different categories are disclosed in one claim, ② where the claimed matter is more than two, ③ where the same claim is disclosed redundantly(referring to the case of the identicalness of claims in terms of wording and different expressions with technically identical meaning shall be exempt), ④ multiple claims care referred to many times within a single claim, etc.	O For the purpose of concise, the number of claims shall be reasonable. It is permitted to have a reasonable number of dependent claims in the claims to define those preferable technical solutions of the invention. (Examination Guidelines Part II Chapter 2, Section 3.2.3)

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		(Example 1) Where more than two subject matter is disclosed in one claim: A high molecular compound of … and a contact lens using the high molecular compound (Example 2) Where more than two claims are referred to in a single claim and then multiple claims are referred to within the claims that are already referred to: for example, it can be 「A product of claim O or claim O manufactured by the method of claim O or claim O」. Such case shall be exempt because it could lead to confusion like the case where a dependent claim referring to more than two claims is dependent upon another claim referring to more than two claims. (Examination Guidelines PartII. Chapter 4. Section 6.3.)	

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(ii) Structure of claims (e.g. Markush claims, Jepson type claims)	o In light of the purpose of the system of the claim, it is necessary that one invention can be identified based on the matters stated in one claim. (Examination Guidelines Part I Chapter 1. Section 2.2.2.1 (2)) o Markush type claims are an accepted. Also, it is not restricted in the interpretation of the scope of patented invention. o The statement for each claim shall be concise. (Article 36 (6)(iii) of the Patent Act) o Matters used to specify the invention are expressed in alternatives and the alternatives have no similar characteristics or function with one another. ① In light of the purpose of Article 36(6)(ii), it is necessary that an invention can be clearly identified from one claim. Also, in light of the purpose of the system of the claim, it is necessary that one invention can be identified based on the matters stated in one claim.	o Where more than two technical matters holding similar characteristics or functions, they can be disclosed in a single claim such as a Markush type claim. o Where the description of Markush type claims is related to chemical substances, such matters can be deemed to hold similar characteristics or functions if the following requirements are all met: ① All the matters shall hold the common characteristics or vitality ② All the matters shall share the important chemical structure, or all the matters shall belong to the group of chemical substances deemed as one group in the technical field to which the invention pertains o In this context, “all the matters shall share the important chemical structure” refers to the cases where multiple chemical substances feature the common chemical structure prominent in the most of the chemical structure, or even multiple chemical	□ An independent claim of an invention shall contain a preamble portion and a characterizing portion, and be presented in the following form: (1) a preamble portion: indicating the title of the claimed subject matter of the technical solution of the invention, and those technical features which are necessary for the definition of the claimed subject matter but which, in combination, are part of the most related prior art; (2) a characterizing portion: stating, in such words as “characterized in that...” or in similar expressions, the technical features of the invention, which distinguish it from the most related prior art. Those features, in combination with the features stated in the preamble portion, serve to define the extent of protection of the invention. (Rule 21.1) □ Where the manner specified in the preceding paragraphs is not appropriate to be followed because of the nature of the invention, an independent claim may be presented in a different manner. (Rule 21.2)

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	② Therefore, when there exist alternatives related to matters used to specify an invention for which a patent is sought and these alternatives do not have a similar characteristics or function, it constitutes a violation of Article 36(6)(ii). ③ Where the statement of the claim includes alternatives such as a Markush-type formula relating to chemical substances, they are considered to have a similar characteristics or function if the following criteria are fulfilled: (i) all alternatives have a common property or activity; and either (ii) (a) a common chemical structure is present, i.e., a significant structural element is shared by all of the alternatives, or (b) if the common chemical structure cannot be the unifying criteria, all alternatives belong to the same class of chemical substances which is recognized as one class in the technical field to which the invention pertains. (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (4))	substances share only a small part of the chemical structure, where the shared chemical structure comprises a significant part in terms of structure. Also, 'the group of chemical substances deemed as one group' means the group of the chemical substances expected based on the knowledge of the technical field that each of the group of chemical substances disclosed as the subject matter is to be identically worked in the claimed invention. In order words, it refers to the case where the same result is expected whichever is chosen among the chemical substances among the group. (Examination Guidelines Part II. Chapter 4. Section 4.)	□ Where a single claim of an application is defined by a number of alternative elements, the "Markush" claim is formed. (Examination Guidelines Part II Chapter 10, Section 8.1.1) The Markush claim shall also comply with the provisions on unity as provided for in Article 31.1 and Rule 34. If the alternative elements in a Markush claim possess similar nature, they shall be regarded as technical related and having the same or corresponding special technical features, and the claim may be considered as meeting the requirements of unity. Such alternative elements are called Markush elements. Where the Markush elements are for alternatives of compounds, they shall be regarded as being of a similar nature, and at the same time the Markush claim possesses unity if they meet the following standards: (1)all alternative compounds possess a common property or activity; and (2) all alternative compounds possess a common structure, which constitutes the distinguishing feature between the

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			compounds and those in the prior art, and is essential to the common property or activity of the compounds of general formula, or under the circumstances that they do not have a common structure, all of the alternative elements belong to the same class of compounds recognized in the technical field to which the invention pertains. □ A “recognized class of compounds" means there is an expectation from the knowledge in the art that members of the class belong to the same class of compounds with the same performance in the context of the claimed invention, i.e., each member may be substituted by another, with the expectation that the same intended result will be achieved. (Examination Guidelines Part II Chapter 10, Section 8.1.1)

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(iii) Categories	o Categories of inventions are divided into two main categories i.e. an invention of a product and an invention of a process. A category of an invention of a process includes an invention of a process for manufacturing products. (Article 2 (3) of the Patent Act) o Such term in a claim as "system" (e.g., "telephone system") is interpreted as those meaning the category of a product. "Use" is interpreted as a term meaning a method for using things which is categorized into "a process." (E.g. "Use of substance X as an insecticide" is interpreted as "method for using substance X as an insecticide." Also, "Use of substance X for the manufacture of a medicament for therapeutic application Y" is interpreted as "method for using substance X for the manufacture of a medicament for therapeutic application Y.") (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (3))	o There are two categories of inventions i.e. product invention and process invention. o Article 2 of Patent Act(Definitions) 3. The term "working" means any act falling under any of the following items: (a) In the case of an invention of a product, acts of manufacturing, using, assigning, leasing, importing, or offering for assigning or leasing (including displaying for the purpose of assignment or lease; hereinafter the same shall apply) the product; (b) In the case of an invention of a process, acts of using the process; and (c) In the case of an invention of a process of manufacturing a product, acts of using, assigning, leasing, importing, or offering for assigning or leasing the product manufactured by the process, in addition to the acts mentioned in item (b).	□ According to their nature, claims are divided into two basic kinds, namely, claims to a physical entity and claims to an activity, which are simply referred to as product claims and process claims respectively. The first basic kind of claim includes any physical entity (product, apparatus) that is produced by a person's technical skill. The second basic kind of claim includes any activity with element of time or process (process, use). Claims to a physical entity include claims to articles, substances, materials, tools, apparatus, and equipment etc. Claims to an activity include claims to manufacturing processes, methods of use, communication methods, processing methods, and methods of applying a product for a specific purpose, etc. (Examination Guidelines Part II Chapter 2, Section 3.1.1)

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(iv) Independent and dependent claims	o Claims are classified into independent form claims and dependent form claims roughly. Independent form claims are those defined without referring to a statement ofother claims, while dependent form claims are those which refer to a statement ofother preceding claims. The two types of claims differ only in the form of the statement, and are treated in the same manner. (Examination Guidelines Part I Chapter 1. Section 2.2.4) o It is permissible to define an invention by using an independent form claim regardless of whether or not the invention defined in the independent form claim is identical to the invention defined in any other claim. o Dependent form claims may be utilized to simplify the statements of the claims by avoiding repetition of the same expressions and phrases. It is permissible to define an invention by use of a dependent form claim regardless of whether or not the invention	o Claims disclosed in the scope of claims (hereinafter referred to as “claims”) are divided into independent patent claims(hereinafter referred to as “independent claims”) and dependent patent claims(hereinafter referred to as “dependent claims”) limiting, adding to or specifying independent claims. o In this context, ‘limiting, adding to or specifying independent claims’ means to substantiating an invention by adding the technical matter or limiting the upper concept with the lower concept. Dependent claims refer to those whose content of the invention is dependent on other claims and when the content of other claims changes the content of the concerned dependent claims changes accordingly. o In terms of the content of the invention, although a claim does not add to or limit an independent claim, if the claim does not depend on the independent claim in	□ The claims shall have an independent claim, and may also contain dependent claims. (Rule 20.1) □ The independent claim shall outline the technical solution of an invention and state the essential technical features necessary for the solution of its technical problem. (Rule 20.2) □ The dependent claim shall, by additional technical features, further define the claim which it refers to. (Rule 20.3) □ Any dependent claim of an invention shall contain a reference portion and a characterizing portion, and be presented in the following manner: (l) a reference portion: indicating the serial number(s) of the claim(s) referred to, and the title of the subject matter; (2) a characterizing portion: stating the additional technical features of the invention. (Rule 22.1) □ Any dependent claim shall only refer to the preceding claim or claims. Any multiple dependent claims, which refers to two or more

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	defined in the dependent form claim is identical to the invention defined in the claims referred to. o Claims may be written in dependent form to simplify the statements of the claims by making reference to a statement ofother claims, when writing claims which substitute a part of the matters used to specify the invention of other preceding claims or when writing claims in a different category from that of other preceding claims, as far as the statements of the claims do not become unclear. o Multiple dependent form claims are claims defined by making reference to statements of two or more claims (regardless of independent or dependent), and are utilized in simplifying the statements of the claims. (Examination Guidelines Part I Chapter 1. Section 2.2.4.2 (1)(2)) o If a multiple dependent form claim refers to	formalities, the claim cannot be considered as dependent claim. Even if a claim depends on an independent claim in formalities, where the claim does not limit or add to the independent claim (for example: in Claim O, a product with the composition of A substituted with B), the claim cannot be considered as dependent claim. (Note) Article 5(1) of the Enforcement Decree of the Patent Act states that the claim that substantiates the independence by limiting or adding to it may be entered as the dependence. However, it does not necessarily mean than that claims substantiated by way of limiting or adding to independent claims shall be described in the form of dependence. Therefore, claims substantiated by way of limiting or adding to independent claims, too, can be described in the form of dependence. (Examination Guidelines Part II. Chapter 4. Section 6.1.) o Independent claims shall be entered without	claims, shall refer to the preceding claims in the alternative only, and shall not serve as a basis for any other multiple dependent claims.(Rule 22.2) □ Under some circumstances, a claim appearing in the form of dependent claim (i.e., including a reference portion as of a dependent claim) is not necessarily a dependent claim in substance. For example, claim 1 reads, “A machine tool having feature X". A following claim reads, “A machine tool according to claim 1, characterized in that feature X is replaced by feature Y". Here, the following claim is also an independent claim. (Examination Guidelines Part II Chapter 2, Section 3.1.2)

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	statements of two or more claims in non-alternative form or if it does not impose an identical technical limitation on the respective claims referred to, it does not comply with the instruction on claiming practice which is provided in Note 14d of Form 29 of Regulations under Patent Act. This instruction, however, is not one of the legal requirements provided in the Act as a basis of a decision of refusal. Therefore, mere non-compliance with the instruction does not constitute a reason for refusal of an application. On the other hand, such a case as Example 1 or 2 should be determined as violating Article 36(6)(ii) because it makes a claimed invention unclear. Example 1: The claimed invention becomes unclear due to the unclear statement caused by non-alternative reference to statements of other claims. 1. An air conditioner with specific construction. 2. An air conditioner as defined in claim 1	depending on other claims in the form of independence. However, even independent claims can be entered without depending on other claims within the scope in which the invention can be clearly understood to avoid the redundant description of the same matter. (Example 1) A product of … manufactured by the method of claim O (Example 2) A method of … manufacturing a product of claim O by … (Example 3) A method of … by using a product manufactured by the method of claim O (Example 4) A product manufactured with the device of claim O o Dependent claims shall be entered by referring to independent claims or other dependent claims. Dependent claims shall all include the characteristics of the claims referred to. (Example 1) A product of…, in terms of …in	

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	provided with a wind direction regulating means. 3. An air conditioner as defined in claims 1 and 2 provided with a flow regulating means. Example 2: The category of the claimed invention becomes unclear due to the reference being made to claims of different categories, although an identical technical limitation is imposed on the claims referred to. 1. An artificial heart with specific structure. 2. A process for producing an artificial heart of specific construction, comprising specific methods. 3. An artificial heart as defined in claim 1 provided with a safety device, or a process for producing the artificial heart as defined in claim 2 provided with a safety device. (Examination Guidelines Part I Chapter 1. Section 2.2.4.2 (3))	claim O (Example 2) A method characterized with … in a method of … of claim O or claim O o Claims in the following cases shall be treated as independent claims, not dependent claims. ① Where claims are entered in the form of decreasing the subject matter of the claims referred to ② Where the subject matter disclosed in the claims referred to is entered in the form of substituted with other matter (Example) 〔Claim 1〕 A power transfer unit with the structure of … equipped with a gear electric motor 〔Claim 2〕 A power transfer unit equipped with a belt conveyor, instead of a gear electric motor, in claim 1 (Examination Guidelines Part II. Chapter 4. Section 6.2.) o In a claim that quotes not less than two	

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		claims, the quoted claim shall not re-quote two or more other claims. The same shall apply to the formula by which in a claim that quotes not less than two claims, the quoted claim quotes one claim resulting in re-quoting not les than two claims after quoting one claim. (Article 5(6) of the Enforcement Decree of the Patent Act)	
(v) Arrangement of claims	o Statements of the claim under Article 36(6)(iv) of the Patent Act which are to be in accordance with the Ordinance of the Ministry of Economy, Trade and Industry shall be as provided in each of the following items: (i) for each claim, the statements shall start on a new line with one number being assigned thereto; (ii) claims shall be numbered consecutively; (iii) in the statements in a claim, reference to other claims shall be made by the numbers assigned thereto; (iv) when a claim refers to another claim, the claim shall not precede the other claim to	o Arrangement of more than one claim should meet the requirements set forth in Article 5 of the Enforcement Decree of the Patent Act o When a dependent claim is entered, one or more paragraphs from independent claims or other dependent claims shall be quoted and the number of paragraphs quoted shall be entered. (Article 5(4) of the Enforcement Decree of the Patent Act) o A claim that quotes not less than two claims shall mention alternatively the numbers of the quoted claims. (Article 5(5) of the Enforcement Decree of the	□ If there are several claims; they shall be numbered consecutively in Arabic numerals. (Rule 19.2) □ An invention shall have only one independent claim, which shall precede all the dependent claims relating to the same invention. (Rule 21.3) □ All the dependent claims that depend directly or indirectly on a certain independent claim shall be grouped together after the independent claim and before another independent claim. (Examination Guidelines Part II Chapter 2, Section 3.3.2)

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	which it refers. (Article 24-3 of Regulations under the Patent Act, Form 29-2)	Patent Act) o The quoted claim shall be entered ahead of the claim that quotes other claim. (Article 5(7) of the Enforcement Decree of the Patent Act) o Each claim shall be stated in a new line and the claims shall be numbered in sequence. (Article 5(8) of the Enforcement Decree of the Patent Act)	
(3) Clarity	o (6) The statement of the scope of claims as provided in paragraph (2) shall comply with each of the following items: (i) ・・・ (ii) the invention for which a patent is sought is clear; (Article 36(6)(ii) of the Patent Act)		

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(i) Basic concept	o The statement of the claim has significance to be used for the basis of identifying the claimed invention which is an object for judgment of the patentability requirements such as novelty and inventive step, etc., and also used to secure the mission for specifying the technical scope of the patented invention. Thus, it is necessary that an invention can be clearly identified from one claim. o This Article 36(6)(ii) is intended to maintain these functions of claims and make it clear that a claim should be stated such that an invention for which a patent is sought can be clearly identified. Where an invention for which a patent is sought cannot be clearly identified on the basis of statement of each claim, the claimed invention cannot be examined precisely on the patentability requirements such as novelty or inventive step, etc., and the technical scope of a patented invention cannot be understood. o For an invention to be clearly identified, it is necessary that the scope of the claimed invention is clear, that is, that the invention	o When a patent right is granted to an invention whose description in claims is unclear or concise, a parent application cannot serve its role as the abstract of title which determines the scope of protection of the claimed invention because of the unclear protection scope of the invention. Also, the determination of patentability cannot be conducted. Therefore, Article 42(4)(ii) of the Patent Act can be deemed to be a provision to prevent such issues.. (1) In principle, whether the claimed invention is disclosed clearly and concisely shall be determined by a person skilled in the technical field to which the invention pertains based on the description of the claims with consideration of a detailed description of the invention or the description of drawings as well as the level of technology at the time of application filing. It cannot be determined except for the description of the claims. (2) That an invention shall be concisely	□ According to Chinese Patent Law, Article 59: The extent of protection of the patent right for invention shall be determined by the terms of the claims. The description and the appended drawings may be used to interpret the content of the claims. □ According to Chinese Patent Law, Article 26.4, the claims shall define the extent of the patent protection sought for in a clear and concise manner. □ The claims shall specify the technical features of the invention. (Regulations, Rule 19.1.) □ The requirement that the claims shall be clear means, on the one hand, individual claims shall be clear, and on the other hand, the claims as a whole shall be clear as well. □ The category of each claim shall be clear. The title of the subject matter of a claim shall indicate clearly whether the claim is a product claim or a process claim. It is not permissible to use a vague title of subject matter, such as “A technique .. “, or to include

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	is stated in such a way that it is possible to understand whether a specific product or process falls within the scope of the claimed invention, and as a premise, it is necessary that the matters used to specify the invention are clear. (Examination Guidelines Part I Chapter 1. Section 2.2.2.1 (1)) o Typical Examples of Violation of Article 36(6)(ii) ・The invention is unclear resulting from the statement of the claim itself being unclear. ・The invention is unclear, resulting from a technical defect existing in the matters to define the invention. ・The invention is unclear because the category of an invention (an invention of a product, an invention of a process, an invention of a process for producing a product) for which a patent is sought is unclear, or something that does not fall in any category is stated in a claim. ・The scope of the invention is unclear as a	disclosed does not mean that the definition of the invention shall be concise. It means that the description itself in the claims shall be concise. (Examination Guidelines Part II. Chapter 4. Section 4.) o Where the category to which the claimed invention belongs is unclear	both product and method in the title of subject matter of a claim, such as “A product ... and a process for making the same”. The title of subject matter of a claim shall also be adaptive to the technical contents of the claim. □ The extent of protection as defined by each claim shall be clear. □ The claims as a whole shall be clear as well. This means that the reference relations between the claims shall be clear. (Examination Guidelines Part II Chapter 2, Section 3.2.2)

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	result of the expression (Examination Guidelines Part I Chapter 1. Section 2.2.2.3)		
(ii) Indication of non-technical matters	o If Non-technical matter is stated in a claim as a whole, as a result of existence of such statements as sales area or distributors, etc., the description of the claims is considered not to comply with the requirements of Article 36(6)(ii) of the Patent Act. (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (2) ⑤)	o Cases where an invention is not disclosed clearly and concisely include: Where an invention is not clear and concise since items irrelevant of the technical composition of the invention such as commercial benefits, regions of sale, places of sale, etc. (Examination Guidelines Part II. Chapter 4. Section 4.)	□ The claims shall describe the technical features of the invention. The claims shall not contain any words or sentences that have no relation to the contents of the technical solution, such as “to ask for the protection of the right of production and sale under this patent", etc., nor shall the claims contain any commercial advertising, or any language belittling other persons or products of other persons. (Examination Guidelines Part I Chapter 1, Section 7.8) □ Except for the technical features, a claim shall neither contain unnecessary explanations as to the cause or reason, nor shall it contain commercial advertising.

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			(Examination Guidelines Part II Chapter 2, Section 3.2.3)
(iii) Definition by function	o In light of the purpose of Article 36(5), various forms of expression can be used in the claim by the applicant to define an invention for which a patent is sought. o In the case of "an invention of a product", various forms of expression such as operation, function, property, characteristics, method, use and others can be used as matters used to specify an invention, in addition to the forms of expression such as combination of products or the structure of products. o On the other hand, since a claim should be stated in such a manner that an invention can be clearly identified from one claim according to the provision of Article 36(6)(ii). Therefore,	o Where claims include functional expressions describing the function or effect of an invention, but if the composition of the invention is not deemed to be clear even with such descriptions, the claims cannot be allowed(refer to Supreme Court Case No. 97 Hu 1344, October 18, 1998). In this context, cases where the composition of the invention is deemed to be clear even with functional expressions refers to ① where expressing claims functionally is necessary since the technical idea of the invention cannot be clearly disclosed only with the existing technical composition (There are cases where the scope of claims cannot be expressed only	□ See (4) Support in description of the invention(ii)(d)-Definition by function

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	it should be noted that such definition of an invention is allowed as far as the claimed invention can be clearly identified. (Examination Guidelines Part I Chapter 1. Section 2.2.2.2 (1)(2)) o If a claim includes an expression defining the invention by a function or characteristics, etc., there may be cases where, although the scope of the invention is clear, it is evident, in light of the common general knowledge as of the filing, that the matter defined by the function or characteristics, etc. is not sufficiently specified from a technical perspective, and the claimed invention cannot be examined precisely on the patentability requirements, such as novelty or inventive step, etc., based on the statement of the claim, even by taking into account the statements of the description and drawings. In such case, the function of the claim (2.2.2.1(1)), that is, that it is necessary that an invention can be clearly identified from one claim, is not maintained, and therefore the application is	with the detailed description of the composition due to the characteristics of the technical field to which the concerned invention pertains such as BM invention or computer-related invention, etc.), ② where the meaning of the functional expressions are clearly specified by the description of the detailed description of the invention and description in drawings(refer to Patent Court Case No. 2005 Hu 7354). o Where claims include functional expressions, the examiner shall determine whether the subject matter for which patent protection is sought is clearly understood from a perspective of a person skilled in the technical field to which the invention pertains considering the detailed description of the invention or the description in drawings and the level of technology at the time of application filing. If deemed otherwise, the examiner shall notify a ground for rejection citing the violation of Article 42(4)(ⅱ) of the Patent Act(refer to Supreme Court Case No.	

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	in violation of Article 36(6)(ii). (Examination Guidelines Part I Chapter 1. Section 2.2.2.4 (1))	2005 Hu 1486, September 6, 2007). (Examination Guidelines Part II. Chapter 4. Section 4.)	
(iv) Definition by manufacturing process	o The claimed product itself may be defined by the manufacturing process (product-by-process claim) when it is impossible, difficult or inappropriate for the product structure of the invention to be directly defined by the characteristics or others independently of the manufacturing process. (For example, it would be considered an inappropriate case if, although it would not be impossible or difficult to define the product directly by the characteristics, it would increase the degree of difficulty to understand.) o Where a claim includes an expression defining a product by its manufacturing process, normally, the claimed invention shall	o The method of writing claims related to a product in ways of "a product manufactured by the method of", "a product manufactured with the apparatus of" shall be exceptionally recognized only when the composition of a product for which patent protection is sought cannot be properly disclosed (new matters, ingredients, food, etc.). Such claims shall be allowed to filed as one application of claims disclosing a method, apparatus and product and a group of inventions. o Although the composition of a product filed in the above-mentioned format, where the invention is recognized to be unclear because	□ Where one or more technical features of a product claim cannot be clearly expressed by either features of structure or features of parameter, it is allowed to express the technical features by virtue of features of process. However, the subject matter of the product claim expressed by the features of process is still the product, and the actual definitive effect of the features of process depends on what impact they may impose on the claimed product per se. (Examination Guidelines Part II Chapter 2, Section 3.1.1) □ Where one or more technical features in a product claim cannot be clearly expressed in terms of either structural features or

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	be examined on the patentability requirements, such as novelty or inventive step, etc., while considering that such expression refers to the final product itself. A precise examination on the patentability requirements may not be made if the structure or property, etc. of the product cannot be understood. In such case, the function of the claim (2.2.2.1(1)), that is, that it is necessary that an invention can be clearly identified from one claim, is not maintained, and therefore the application is in violation of Article 36(6)(ii). (Examination Guidelines Part I Chapter 1. Section 2.2.2.4 (2))	of the failure in the composition of the product, an examiner shall notify a ground for rejection citing the violation of Article 42(4)(ii) of the Patent Act. (Examination Guidelines Part II. Chapter 4. Section 4.)	parameter features, it is permissible to express them with the aid of process features. □ A process claim is suitable for an invention of process, and shall usually be described in terms of such technical features as technological process, operating conditions, steps, and procedures. (Examination Guidelines Part II Chapter 2 3.2.2) □ As for a chemical product which cannot be clearly described merely by its structure and/or composition, the description shall further state the product by proper chemical/physical parameters and/or the manufacturing process, so that the claimed chemical product can be clearly identified. (Examination Guidelines Part II Chapter 10, Section 3.1)

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(v) Definition by parameters	o Expressions using a numerical limitation which only indicates either a minimum or a maximum such as “more than...“ or “less than...,“ and as a result, the scope of the invention is unclear. o A numerical limitation which includes zero (0) such as “from 0% to 10%,” and as a result, the scope of the invention is unclear. When it is clearly stated in the detailed explanation of the invention that the component defined by the numerical limitation is an essential component in the above-mentioned example, such statement is inconsistent with the statement of the claim, “from 0 to 10%” which would be interpreted as the component being an optional component and also interpreted in many ways, and the scope of the invention is deemed unclear. On the other hand, if it is clearly stated in the detailed explanation of the invention that the component defined by the numerical limitation is an optional component, the numerical limitation including zero (0) is permissible.	o A parameter invention refers to the one created with part of the composition of the invention after an examiner arbitrarily creates a parameter on physical·chemical figure which is not the standard or prevalently used in the concerned technical field or creates a parameter in operation expression by using the correlation among multiple variables. Since the technical composition of a parameter invention having the figure that the parameter represents cannot be clearly understood only with the description, the invention shall be deemed not to be described clearly and concisely except for ① where the definition or technical meaning of parameter is clearly understood, ② where a ground for failure in the use of the concerned parameter is clearly shown, and ③ where the relation with the level of technology at the time of application filing is understood, considering a detailed description of the invention or drawing as well as the level of technology.	□ Where one or more technical features in a product claim cannot be clearly expressed in terms of structural features, it is permissible to express them with the aid of physical or chemical parameters. (Examination Guidelines Part II Chapter 2, Section 3.2.2) □ As for a chemical product which cannot be clearly described merely by its structure and/or composition, the description shall further state the product by proper chemical/physical parameters and/or the manufacturing process, so that the claimed chemical product can be clearly identified. (Examination Guidelines Part II Chapter 10, Section 3.1)

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	(Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (5))	o In order for the ground for failure in the use of the parameter to be clearly shown, the cause and effect relationship between the parameter and effect as well as the relation between the technical problem and the parameter as its solution shall be clearly understood through comparative examples of the satisfactory cases as well as the unsatisfactory case of the parameter. Also, for the relation between the parameter and the level of technology at the time of application filing to be understood, a detailed description of the invention shall include examples of comparative experiments of materials holding similar structure or effect or logical explanation so that it shall be clearly understood that such materials are not included to the claimed invention. o Although the technical meaning of the parameter, the reason why the concerned parameter cannot be used and the relation with the level of technology at the time of application filing are not explicitly disclosed	

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		in a detailed description of the invention or drawings, but if they can be clearly understood with consideration of the level of technology at the time of application filing, an examiner shall not consider the concerned invention as unclear only based on such grounds. (Examination Guidelines Part II. Chapter 4. Section 4.) (Example 4) As for an invention defined by numerical limitation, where numerical limitation without maximum or minimum description such as 'more than', 'less than', '0~10' or numerical limitation including 0(excluded when the composition including 0 is an arbitrary composition, not necessary composition) is disclosed. Or, where dual numerical limitations are disclosed within a single claim such as '120-200℃ or more appropriately 150-180℃' ⇒In this context, 'arbitrary composition' refers to the one that is additionally added or is deemed not to be added based on the	

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		applicant's need and the one whose intention is clearly disclosed in a specification (Examination Guidelines Part II. Chapter 4. Section 4)	
(vi) Definition of terms	o Where the statement of a claim is deemed clear by itself, the examiner should examine whether a term in the claim is defined or explained in the description or drawings, and evaluate whether such definition or explanation, if any, makes the statement of the claim unclear. o Where the statement of a claim is unclear by itself, the examiner should examine whether a term in the claim is defined or explained in the description or drawings, and evaluate whether such definition or explanation, if any, makes the statement of the claim clear by considering the common general knowledge as of the filing. If the	o In a case where an applicant specifically defines a term in the detailed description to the extent that it is clearly understood that the term is different from any general meaning, in order to specify the term as a specific meaning not as general meaning in the technical field to which an invention pertains, the term is interpreted as a term with the specific meaning. However, only the description of the specific concept of the term in the claims in the detailed description and drawings, does not fall under the specific definition aforementioned.	o Any document submitted in accordance with the provisions of the Patent Law and these Implementing Regulations shall be in Chinese; the standard scientific and technical terms shall be used if there is a prescribed one set forth by the State; where no generally accepted translation in Chinese can be found for a foreign personal name, toponym or scientific or technical term, the one in the original language shall be also indicated. (Regulations, Rule 3.1.) o The scientific and technical terms used in the claims shall be consistent with that used in the description. (Regulations, Rule 19.3) o Generally, the words used in a claim shall

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	examiner deems that an invention can be clearly identified as a result of this evaluation, the requirement of Article 36(6)(ii) is satisfied. o It would be noted that it goes without saying that content of statement of the claim by itself should not be made unclear particularly by using ambiguous or unclear terms or by stating the matter in only the detailed explanation of the invention, not in the claims, even though the matter can be made clear in the claims. (Examination Guidelines Part I Chapter 1. Section 2.2.2.1 (4)) o As to the technical terms such as microorganisms, substances with foreign names, the meaning of which is difficult to be fully expressed in Japanese, the name thereof in Japanese is followed by words in the original language in parentheses. (Article 24-4 of Regulations under the Patent Act, Form 29-2)	(Note) A term in a patent specification is interpreted with the general meaning in the technical field and should be unified over the whole specification. However, if an applicant intends to use a certain term to have a specific meaning, an applicant is allowed to define the meaning of the term. So, the term can be simply interpreted according to the specific definition when the meaning of term is defined in the description(Supreme court 1998.12.22 97 Hu 990 Sentence). (Examination Guidelines Part III. Chapter 2. Section 4.1.1)	be understood as having the meaning that they normally have in the relevant art. In particular cases, where the description explicitly gives a certain word a special meaning and, by virtue of the definition to the word in the description, the extent of protection of the claim using the word is defined sufficiently clearly, such a case is also allowed. However, in this case the examiner should also invite the applicant to amend as far as possible the claim whereby the meaning is clear from the wording of the claim alone. (Examination Guidelines Part II Chapter 2, Section 3.2.2)

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(vii) Description in alternative form	o Matters used to specify the invention are expressed in alternatives and the alternatives have no similar characteristics or function with one another. ① In light of the purpose of Article 36(6)(ii), it is necessary that an invention can be clearly identified from one claim. Also, in light of the purpose of the system of the claim, it is necessary that one invention can be identified based on the matters stated in one claim. ② Therefore, when there exist alternatives related to matters used to specify an invention for which a patent is sought and these alternatives do not have a similar characteristics or function, it constitutes a violation of Article 36(6)(ii). ③ Where the statement of the claim includes alternatives such as a Markush-type formula relating to chemical substances, they are considered to have a similar characteristics or function if the following criteria are fulfilled: (i) all alternatives have a common property or activity; and either (ii) (a) a common chemical structure is	o Where more than two technical matters holding similar characteristics or functions, they can be disclosed in a single claim such as a Markush type claim. o Where the description of Markush type claims is related to chemical substances, such matters can be deemed to hold similar characteristics or functions if the following requirements are all met: ① All the matters shall hold the common characteristics or vitality ② All the matters shall share the important chemical structure, or all the matters shall belong to the group of chemical substances deemed as one group in the technical field to which the invention pertains o In this context, “all the matters shall share the important chemical structure” refers to the cases where multiple chemical substances feature the common chemical structure prominent in the most of the chemical structure, or even multiple chemical	o Such expressions as “for example”, “had better”,“particularly”, “if necessary”, and the like shall not be used in a claim, since they will define different extents of protection in a single claim, making the extent of protection thereof unclear. (Examination Guidelines Part II Chapter 2, Section 3.2.2) o In generalization by means of parallel options, the specific options being put in parallel shall be comparable with each other in content. A generic term cannot be connected in parallel with a specific term by the conjunction “or”. Moreover, the meaning of the parallel options shall be clear. For example, in the expression “A, B, C, D, or the like (equipment, process, substance) “, the meaning of the option “the like” is unclear, therefore it cannot be placed in parallel with the specific products or processes (A, B, C, D). (Examination Guidelines Part II Chapter 2, Section 3.3) □ Where a single claim of an application is defined by a number of alternative elements, the “Markush" claim is formed. (Examination

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	present, i.e., a significant structural element is shared by all of the alternatives, or (b) if the common chemical structure cannot be the unifying criteria, all alternatives belong to the same class of chemical substances which is recognized as one class in the technical field to which the invention pertains. (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (4)) o Expressions where optionally added items or selective items are stated along with such words as "when desired," "if necessary," etc., or expressions including such words as "especially," "for example," "etc.," "desirably," and "suitably." o Such expressions would leave unclear the condition on which of the optionally added or selective items are chosen, thus allow the claim statements to be interpreted in many ways. (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (5) ④)	substances share only a small part of the chemical structure, where the shared chemical structure comprises a significant part in terms of structure. Also, 'the group of chemical substances deemed as one group' means the group of the chemical substances expected based on the knowledge of the technical field that each of the group of chemical substances disclosed as the subject matter is to be identically worked in the claimed invention. In order words, it refers to the case where the same result is expected whichever is chosen among the chemical substances among the group. (Examination Guidelines Part II. Chapter 4. Section 4) (Example 1) Where arbitrary additional items or selective items are disclosed along with expressions such as 'at one's will', 'if necessary', 'in particular', 'for example', 'and/or' ⇒'Invention A and/or Invention B' refers to both 'Invention A and Invention B' and	Guidelines Part II Chapter 10, Section 8.1.1) The Markush claim shall also comply with the provisions on unity as provided for in Article 31.1 and Rule 34. If the alternative elements in a Markush claim possess similar nature, they shall be regarded as technical related and having the same or corresponding special technical features, and the claim may be considered as meeting the requirements of unity. Such alternative elements are called Markush elements. Where the Markush elements are for alternatives of compounds, they shall be regarded as being of a similar nature, and at the same time the Markush claim possesses unity if they meet the following standards: (1)all alternative compounds possess a common property or activity; and (2) all alternative compounds possess a common structure, which constitutes the distinguishing feature between the compounds and those in the prior art, and is essential to the common property or activity

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		'Invention A or Invention B'. Therefore, both cases shall be determined for the violation of Article 42(4)(ⅰ)(ⅱ) of the Patent Act. In such a case, it shall be determined whether the description of 「and/or」 may lead to multiple contrasting inventions are claimed in a single claim(whether proper number of claims are disclosed according to the characteristics of the invention).	of the compounds of general formula, or under the circumstances that they do not have a common structure, all of the alternative elements belong to the same class of compounds recognized in the technical field to which the invention pertains. A "recognized class of compounds" means there is an expectation from the knowledge in the art that members of the class belong to the same class of compounds with the same performance in the context of the claimed invention, i.e., each member may be substituted by another, with the expectation that the same intended result will be achieved. (Examination Guidelines Part II Chapter 10, Section 8.1.1)

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(viii) Use of ambiguous terms (e.g. definition by terms indicating extent)	o The scope of the invention is unclear as a result of the following expression: ① Negative expressions such as "except..." or "not..." in claims, and as a result, the scope of the invention is unclear. ② Expressions using a numerical limitation which only indicates either a minimum or a maximum such as "more than..." or "less than...," and as a result, the scope of the invention is unclear. ③ Expressions where the standard or degree of comparison is unclear (e.g. "with slightly greater specific gravity," "much bigger," "high temperature," "low temperature," "hard to slip," "easy to slip") or where the meaning of the term is ambiguous, and as a result, the scope of the invention is unclear. ④ Expressions including such words as "especially," "for example," "etc.," "desirably," and "suitably." ⑤ A numerical limitation which includes zero (0) such as "from 0% to 10%," and as a result, the scope of the invention is unclear. ⑥ The statement of a claim is made by a	o Where claims include the unclear expression about the composition of the invention. However, even with the use of such unclear expression, where the meaning is clearly supported by a detailed description of the invention and the invention is deemed to be clearly specified, the invention shall not be deemed to be unclear. (Example 1) Where arbitrary additional items or selective items are disclosed along with expressions such as 'at one's will', 'if necessary', 'in particular', 'for example', 'and/or' ⇒'Invention A and/or Invention B' refers to both 'Invention A and Invention B' and 'Invention A or Invention B'. Therefore, both cases shall be determined for the violation of Article 42(4)(ⅰ)(ⅱ) of the Patent Act. In such a case, it shall be determined whether the description of「and/or」may lead to multiple contrasting inventions are claimed in a single claim(whether proper number of claims are disclosed according to the characteristics of	□ Any term whose meaning is indefinite, such as "thick", "thin", "strong", "weak", "high temperature", "high pressure", "very broad scope", etc., shall not be used in a claim, unless the term has a well-recognized definite meaning in the particular art, such as "high frequency" in relation to an amplifier. Where the term has no well-recognized meaning, it should, if possible, be replaced by a more precise wording selected from the description. □ Generally, such terms as "about", "approximately", "etc. ", "or the like", and the like shall not be used in a claim, since they are likely to make the protection extent of the claim unclear. Where in a claim there exists such a term, the examiner shall make a judgment as to whether use of such term makes the claim unclear according to the specific situation, and if not, the use of such term is permitted. (Examination Guidelines Part II Chapter 2, Section 3.2.2)

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	reference to the detailed explanation of the invention or drawings, and as a result, the scope of the invention is unclear. (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (5))	the invention). (Example 2) Where unclear expressions of comparison or degree are used such as 'mainly', 'as main process', 'appropriate', 'proper amount of', 'many', 'high', ' most of', 'almost', 'approximately', 'about' (Example 3) Where unclear expressions of negation are used such as 'except for', 'other than' (Example 4) As for an invention defined by numerical limitation, where numerical limitation without maximum or minimum description such as 'more than', 'less than', '0~10' or numerical limitation including 0(excluded when the composition including 0 is an arbitrary composition, not necessary composition) is disclosed. Or, where dual numerical limitations are disclosed within a single claim such as '120-200℃ or more appropriately 150-180℃' ⇒In this context, 'arbitrary composition'	

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		refers to the one that is additionally added or is deemed not to be added based on the applicant's need and the one whose intention is clearly disclosed in a specification (Examination Guidelines Part II. Chapter 4. Section 4)	
(ix) Claims attempting to define the invention by objectives to be attained	o Refer to 3.(3)(iii)"Definition by function" above.	o Refer to 3.(3)(iii)"Definition by function" above.	□ Definition merely provided by objectives to be attained is equivalent to pure functional definition. □ Claims of pure functional definition cannot be supported by the description, and therefore is not permitted. (Examination Guidelines Part II Chapter 2, Section 3.2.1)

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(x) Definition using chemical or mathematical equations or formulas	o Chemical formula etc. in claims are described in the following manners: when chemical formula is described, a sequence number like "[Chem. 1], [Chem. 2]" is referred before the chemical formula, when numerical formula is described, a sequence number like "[Math. 1], [Math. 2]" is referred before the numerical formula, when table is described, a sequence number like "[Table 1], [Table 2]" is refereed before the table, referring to a sequence number in the described order. (Form 29-2)	o If a claimed invention uses any laws other than a law of nature (e.g. economic laws, mathematical methods, logics, cartography etc), arbitrary arrangements (e.g. a rule for playing a game as such) or mental activities (e.g. method for doing business as such, teaching skills as such, financial insurance scheme as such, tax code as such, etc.), the claimed invention is not considered to be statutory. o Where a claimed invention does not involve logics, mathematical principle as such or method directly using them but involves technical devices or a method which gives useful, concrete and tangible result by increasing or controlling the performance of a certain technical tools with the data, if the technical devices or technical methods are considered as universal, repetitive and objective, they are deemed as a statutory invention which uses technical idea utilizing a law of nature.	□ The claims may contain chemical formulae or mathematical formulae but shall contain no drawings. (Regulations Rule 19.3 and 19.4) □ Usually, a claim shall not contain table, unless using table can define the subject matter of an invention more clearly. (Examination Guidelines Part II, Chapter 2, Section 3.3)

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		o As stated above, the characteristics of the technology is to be taken into account as a whole in judging whether a claimed invention utilizes a law of nature. Therefore, even if a part of matters defining an invention stated in a claim utilizes a law of nature, when it is judged that the claimed invention considered as a whole does not utilize a law of nature, the claimed invention is deemed as not utilizing a law of nature. On the contrary, even if a part of matters defining an invention stated in a claim does not utilize a law of nature, when it is judged that the claimed invention as a whole is considered as utilizing a law of nature, the claimed invention is deemed as utilizing a law of nature. (Examination Guidelines Part III. Chapter 1. Section 4.1.4) o The claims may contain chemical formulas. (Example) [Claim 1] Compounds in the below-mentioned formula	

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		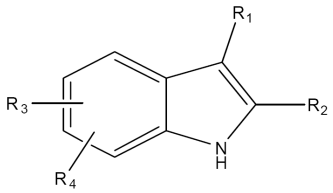 In this formula, R1 is selected among the group comprising phenyl, pyridyl, tiazolyl, triazinyl, alkylthio, alkoxy and methyl and R2-R4 are methyl, benzyl or phenyl. These compounds are effective as drugs for increasing the capacity of absorbing oxygen in blood. (Examination Guidelines Part II. Chapter 5. Section 7.1)	
(xi) Devices or objects with limitations on their usage	o In case that the statement of the claim does not express a specific use but a general use, where a claim directed to a use invention (Refer to Part Ⅱ : Chapter 2. 1.5.2(2)), it should not be deemed a violation of Article 36(6)(ii) merely because the statement expresses a general use (i.e., merely because the scope of the claim is relatively broad) unless the expression makes unclear the	o Where a claim includes an expression specifying a product by its use (i.e limitation of use), the examiner should interpret the claimed invention only as a product specially suitable for the use disclosed in the claim, by taking into account the detailed descriptions in the specification and drawings and the common general technical knowledge at the time of the filing. Even if a product includes	□ For a product claim the subject matter title of which contains definition by use, the definition by use shall be taken into account in determining the extent of patent protection of the product claim. However, the actual definitive effect of the use definition shall depend on the impact it imposes on the claimed product per se. For example, a claim the subject matter title of which is a “mould

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	invention for which a patent is sought. (For example, not a "pharmaceutical/agrochemical agent for disease X comprising..." but a "pharmaceutical/agrochemical agent comprising...") Where a claim is directed to a composition and does not include any statement to define the use of the composition or the property of the composition, it shall not be deemed a violation of Article 36(6)(ii) merely because the claim does not include any definition of the use or property of the composition. (Examination Guidelines Part I Chapter 1. Section 2.2.2.2 (3))	all technical characteristics described in the claims, an examiner should not regard the product as the product described in the claim when the product is not appropriate for the relevant use or when the product needs conversion to be used. For example, 「crane hook with a shape of ~」merely indicates hook includes technical features with size and strength suitable for crane. So it is appropriate that the crane hook should be construed as a different product from 「fishing hooks」with regard to the structure. (Examination Guidelines Part III. Chapter 2. Section 4.1.2)	for molten steel casting", wherein the use definition "for molten steel casting" has definitive effect on the subject matter "mould". Therefore "a plastic tray for forming ice cube" with a melting point much lower than that of "mould for molten steel casting" would not come within the protection extent of the claim, because it is impossible to be used as a mould for molten steel casting. However, if the definition such as "used for .." has no impact on the claimed product or device per se and is only a description of the use or manner of use of the product or device, then it has no influence in determining for example whether the product or device has novelty or involves an inventive step. Another example is a "compound X for use in ..". If the phrase "for use in .." has no influence on the compound X per se, then the use definition "for use in ." has no effect in the determination of whether or not the compound X has novelty or involves an inventive step. (Examination Guidelines Part II Chapter 2, Section 3.1.1)

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			□ A use claim belongs to the category of process claim. However, the examiner shall pay attention to distinguishing a use claim from a product claim from the wording thereof. For example, a claim in such a form as "using compound X as an insecticide" or "the use of compound X as an insecticide" is a use claim, and belongs to process claim, while a claim in such a form as "an insecticide made of compound X" or "an insecticide containing compound X" is not a use claim but a product claim. (Guideline Part II Chapter 2, Section 3.2.2)
(xii) References to description of the invention or to drawings	o The statement of a claim is made by a reference to the detailed explanation of the invention or drawings, and as a result, the scope of the invention is unclear. Example 1: A claim which includes such statement made by a reference as "an automatic drill machine as shown in Figure 1." (It is inadequate to refer to drawings because drawings generally have ambiguous meanings and could be interpreted in many ways.)	o Where a detailed description of the invention or description of drawings is substituted without disclosing the composition of the invention. However, where using a detailed description of the invention or description of drawings is necessary, description by such substitution shall be allowed. (Example) As for an invention related to alloys, where the special relation between	□ They shall not, except where absolutely necessary, contain such references to the description or drawings as: "as described in part... of the description", or "as illustrated in Figure... of the drawings". (Regulations Rule 19.3) □ The technical features mentioned in the claims may, in order to facilitate quicker understanding of the claim, make reference to the corresponding reference signs in the drawings. Such reference signs shall follow

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	Example 2: A claim includes statements made by a reference but the portion to be referred to is not clear. (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (5) ⑥) o Note that, even by referring to the detailed explanation of the invention or drawings, an invention can be stated clearly in a claim as in the following case. Example: In an invention related to an alloy, there is a specific relation among components of the alloy and the relation can be defined by reference to the drawings as clearly as by a numerical or other literal expression. (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (5)⑥)	alloy elements cannot be clearly described only with numerical figures or sentences, drawings can be used for description, like "heat resisting alloy comprising Fe·Cr·Al within the scope surrounding Dot A(…), Dot B(…), Dot C(…), Dot D(…) of the attached Drawing no.1". (Examination Guidelines Part II. Chapter 4. Section 4.)	the corresponding technical features and be placed in parentheses. The reference signs shall not be construed as limiting the claims. (Regulations Rule 19.4) □ The claims shall contain no drawings. Unless absolutely necessary, the claims shall not contain such expressions as "as described in ... of the description", or "as shown in figure …" or the like. The situation "absolutely necessary" refers to the situation where a specific shape involved in an invention cannot be defined with words but only by drawings, in which case the phrase "as shown in figure .." or the like can be used in the claims. □ Technical features in a claim may cite corresponding reference signs in the drawings to facilitate the understanding of the solution as in the claim. Such reference signs shall be placed in parentheses and after the corresponding technical features. Reference signs shall not be construed as limiting the extent of protection of the claim. (Examination Guidelines Part II Chapter 2, Section 3.3)

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(xiii) Others	o (2)The invention is unclear, resulting from a technical defect existing in the matters to define the invention. ①Claim states technically incorrect matters. ②In addition to the incomprehensibility of the technical meaning of a matter to define the invention, it is evident that the matters to define the invention are deficient in light of the common general knowledge as of the filing. When the scope of the claimed invention (refer to 2.2.2.1(1)) is clear, normally, the invention can be clearly identified from the statement of the claim. However, even when the scope of the invention is clear, if the technical meaning of a matter to define the invention is incomprehensible and it is evident that the matters to define the invention are deficient in light of the common general knowledge as of the filing, the claimed invention cannot be	o Where the description of claims are unclear. However, where the unclear part is a mere error in the description and the error does not lead a person skilled in the technical field to which the invention pertains to decide that the invention is unclear or the invention can be easily understood based on the detailed description of the invention, drawings or the level of technology at the time of application filing, the invention shall not be deemed to be unclear. o Where each composition consisting of the invention is merely sequenced, but the connection between the compositions is not disclosed and therefore, the invention is unclear o Where the description of claims is too lengthy, such as the repetition of the same description and so that the description to which patent protection is sought is not clear and concise	

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	examined precisely on the patentability requirements, such as novelty or inventive step, etc. In such case, the function of the claim (2.2.2.1(1)), that is, that it is necessary that an invention can be clearly identified from one claim, is not maintained, and therefore the application is in violation of Article 36(6)(ii). (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (2)) o The invention is unclear, where the category of an invention (an invention of a product, an invention of a process, an invention of a process for producing a product) for which a patent is sought is unclear, or something that does not fall in any category is stated in a claim. (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (3))	o Where the subject is not well specified or the composition of the invention is unclear (Example) Where many different types of gears are disclosed in claims and, when specifying particular gears among them, the subject as 'said spur gear', 'electronic bevel gear' is used and instead, the subjects are unclearly specified such as 'said gear', 'electronic gear' o Where the composition of the invention to which patent protection is sought is unclear since multiple technical terms of the same expression serving different functions in claims are disclosed by specifying different functions or the clear description of the marks used in drawings is not disclosed. (Examination Guidelines Part II. Chapter 4. Section 4.)	

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(4) Support in description of the invention (extent of disclosure in the description and drawings vs. broadness of claims, e.g. the relationship between the scopes of working examples and claims, or the extent to which addition of working examples is permitted)	o The statement of the scope of claims as provided in paragraph(2) shall comply with each of the following items: (i)the invention for which a patent is sought is stated in the detailed explanation of the invention. ..... (Article 36(6) of Patent Act)	o The claim(s) under paragraph (2) 4 shall describe the matter for which protection is sought in one or more claims (hereinafter referred to as "claim(s)") and the claim(s) shall comply with each of the following subparagraphs: 1. The claim(s) shall be supported by a detailed description of the invention; (Article 42(4) of Patent Act)	□ Art. 26.4 requires "The claims shall be supported by the description" （See Article 26.4）. □ "The claims shall be supported by the description" means that the technical solution for which protection is sought in each of the claims shall be a solution that a person skilled in the art can reach directly or by generalization from the contents sufficiently disclosed in the description, and shall not go beyond the scope of the contents disclosed in the description.(Examination Guidelines Part II Chapter 2, Section 3.2.1)
(i) Basic concept	o A determination on whether the statement of a claim complies with Article 36(6)(i) shall be made based on comparison and review of the claimed invention and the invention stated in the detailed explanation of the invention. This comparison and review shall be conducted by studying what is stated in the detailed explanation of the invention, on the basis of the claimed invention. The judgment should be done while taking care not to be too	o A detailed description of the invention serves as a written technical disclosure. When an invention not disclosed in a detailed description of the invention was stated as claims and registered, it would lead to the invention not disclosed in the detailed description of the invention being granted a patent right. To avoid it, Article 42(4)(i) of the Patent Act specifies that the claims shall be supported by detailed description of the invention.	□ The generalization of a claim shall not go beyond the scope of the contents disclosed in the description. If the person skilled in the art can reasonably predict that all the equivalents or obvious variants of the embodiments set forth in the description have the same properties or uses, then the applicant shall be allowed to generalize the protection extent of the claim to cover all the equivalents or obvious variants （See Examination Guidelines Part II, Chapter 2,

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	restrictive on the scope of claims by the specific examples stated in the detailed explanation of the invention. o In performing the comparison and review, a substantial correspondence relationship between the claimed invention and the invention stated in the detailed explanation of the invention shall be examined regardless of the consistency of expression. If it would be enough that there is at least consistency of expression, a patent right which has not substantially been disclosed to the public would be established, thus it is against the purpose of this provision. o Examination for the substantial correspondence relationship is performed by looking into whether or not the claimed invention exceeds the scope stated in the detailed explanation of the invention in such a way that a person skilled in the art (refer to 3.2(1)) could recognize that a problem to be solved by the invention would be actually solved. In case determining that the claimed invention exceeds the scope stated in the	o Under Article 42(2) of the Patent Act, a detailed description of the invention refers to the rest of the descriptions other than the title of the invention, brief explanation of drawings(if the explanation on marks is disclosed, it shall be included) as well as the scope of claims among the items disclosed in the specification attached to the patent application submitted by the applicant. o An examiner shall determine whether an invention disclosed in claims are stated in a detailed description of the invention based on whether a person skilled in the technical filed to which the invention pertains can figure out the items corresponding to the invention disclosed in the claims are written in the detailed description of the invention. (Examination Guidelines Part II. Chapter 4. Section 3.)	Section 3.2.1）. □ If other parts of the description also include contents concerning embodiments or examples, and it can be established the generalization of the claim is appropriate viewed from the whole contents of the description, then the claim shall be considered to have support in the description（See Examination Guidelines Part II, Chapter 2, Section 3.2.1）. □ However, that the technical solution in a claim has the same wording as that in the description does not mean the claim is necessarily supported by the description（See Examination Guidelines Part II, Chapter 2, Section 3.2.1）.

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	detailed explanation of the invention in such a way that a person skilled in the art could recognize that a problem to be solved by the invention would be actually solved, the claimed invention and the invention stated in the detailed explanation of the invention are not corresponding with each other and the application doesn't comply with the requirement under Article 36(6)(i). (Examination Guidelines Part I Chapter 1. Section 2.2.1.2)		
(ii) Undue breadth			□ In determining whether the generalization of a claim is appropriate, the examiner shall refer to the relevant prior art. □ If the person skilled in the art can not reasonably predict that all the equivalents or obvious variants of the embodiments set forth in the description have the same properties or uses, then the claim shall not be allowed to cover all the equivalents or obvious variants. （All see Examination Guidelines Part II, Chapter 2, Section 3.2.1）.

COMPARATIVE STUDY OF PATENT PRACTICES ON REQUIREMENTS FOR DISCLOSURE AND CLAIMS

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(a) Disclosure problem	o The claimed inventions should not exceed the scope stated in the detailed explanation of the invention. (Article 36(6)(i) of the Patent Act) (Examination Guidelines Part I Chapter 1. Section 2.2.1.1) o The types that do not comply with Article 36(6)(i) are presented below: (1) The matter neither stated nor implied in the detailed explanation of an invention is stated in the claim. (2) Terms used in the claims and those used in the detailed explanation of the invention are inconsistent and as a result, the relation between the claim and the detailed explanation of the invention is unclear. (3) The content disclosed in the detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention even in light of the common general knowledge as of the filing. (4) As a solution for the problem to be solved by the invention, which is stated in the	o A detailed description of the invention serves as a written technical disclosure. When an invention not disclosed in a detailed description of the invention was stated as claims and registered, it would lead to the invention not disclosed in the detailed description of the invention being granted a patent right. To avoid it, Article 42(4)(i) of the Patent Act specifies that the claims shall be supported by detailed description of the invention. o Under Article 42(2) of the Patent Act, a detailed description of the invention refers to the rest of the descriptions other than the title of the invention, brief explanation of drawings(if the explanation on marks is disclosed, it shall be included) as well as the scope of claims among the items disclosed in the specification attached to the patent application submitted by the applicant. o An examiner shall determine whether an invention disclosed in claims are stated in a	□ “The claims shall be supported by the description" means that the technical solution for which protection is sought in each of the claims shall be a solution that a person skilled in the art can reach directly or by generalization from the contents sufficiently disclosed in the description, and shall not go beyond the scope of the contents disclosed in the description （See Examination Guidelines Part II, Chapter 2, Section 3.2.1）.

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	detailed explanation of the invention, is not reflected in the claim, a patent is being claimed beyond the scope stated in the detailed explanation of the invention. (Examination Guidelines Part I Chapter 1. Section 2.2.1.3)	detailed description of the invention based on whether a person skilled in the technical filed to which the invention pertains can figure out the items corresponding to the invention disclosed in the claims are written in the detailed description of the invention. (Examination Guidelines Part II Chapter 4. Section 3)	
(b) Claims reading on inoperative subject matter	o When the content disclosed in the detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention even in light of the common general knowledge as of the filing, the description of the claims is considered not to comply with the requirements of Article 36(6)(i) of the Patent Act. (Examination Guidelines Part I Chapter 1. Section 2.2.1.3 (3))	o The detailed description of an invention shall be written clearly and fully so that a person with ordinary knowledge in the art to which the invention pertains easily understands the concerned invention. This means that a clear and precise description of the invention should lead a person skilled in the art to easily work the invention based on the technical knowledge, specification and drawings at the time of filing the application. o In determining whether a detailed description of an invention fulfills Article 42(3) of the Patent Act, 'a person with ordinary knowledge in the art to which the	□ The technical solution for which protection is sought in each of the claims shall be a solution that a person skilled in the art □ can reach directly or by generalization from the contents sufficiently disclosed in the description, and shall not go beyond the scope of the contents disclosed in the description (See Examination Guidelines Part II, Chapter 2, Section 3.2.1). □ If the examiner can reasonably doubt that the invention does not meet the requirement of sufficient disclosure, he shall invite the applicant to make a clarification (See Examination Guidelines Part II, Chapter 2, Section 2.1.3).

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		invention pertains' shall be deemed a technician with the average understanding in the technical field to which the application belongs(hereinafter referred to as a person skilled in the art). o Definition of「Easily Working the Invention」 (1) 'Working the invention' in terms of a product invention refers to the act of producing as well as using the product. As for a process invention, working means the act of using the method. Also, when it comes to a manufacturing process invention, working the invention shall refer to the manufacturing of the product by the concerned process. (2) The invention subject to working shall be interpreted as the invention disclosed in claims. Therefore, where an invention only disclosed in the detailed description of the invention, but not in the claims, is not described well enough for the working, it does not violate Article 42(3) of the Patent Act. (3) 'Easily working' refers to a person skilled	

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		in the art to which the invention pertains fully understands the invention and reproduces it with the level of the technology at the time of application filing by referring to the specification, without adding special knowledge and excessive trial and error or repetitive experiments. (Examination Guidelines Part II Chapter 3. Section 2.2)	
(c) Relationship between working examples and claims	o A claim can be stated with expansion or generalization based on one or more specific examples in a detailed explanation of an invention. The maximum expansion or generalization varies with the characteristics of each technical field. For example, comparing the technical field where it is difficult to understand the relationships between the function or characteristics, etc. (refer to 2.2.2.4) of a product and the structure of the product (e.g. chemical compounds), and the technical field where it is relatively easy to understand such relationships (e.g. machine field or electric field), the maximum range expansion or	o If the content disclosed in a detailed description of the invention cannot be extended or generalized to the scope of the claimed invention based on the level of technology of the concerned technical field at the time of application filing, the claimed invention is not supported by the description (Example 1) For example, where an invention is to be specified by the scope of energy efficiency to be achieved, but the detailed description only discloses the embodiment by specific means and it is deemed that the suggested embodiment cannot be extended or generalized to the entire scope of energy	□ Examples, especially the preferred modes for carrying out the invention, are important part of the description, which are extremely important for supporting and interpreting the claims. Therefore, the description shall describe in detail the preferred working examples contemplated by the applicant for carrying out the invention. □ Embodiments are exemplification of the preferred modes for carrying out the invention. The number of working examples shall be determined in accordance with the nature of the invention and the claimed extent of patent protection, etc. □ The description may give only one

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	generalization based on the specific examples tends to be wider in the latter technical field. It is necessary to first determine to which technical field the invention to be examined pertains, and what kind of common general knowledge as of the filing exists in the relevant technical field, and then make a judgment, for each application, as to whether the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the claimed invention. (Examination Guidelines Part I Chapter 1. Section 2.2.1.3 (3) (b)) o In order for the statement of claims to meet the requirements of Article 36(6)(i) of the Patent Act, it is reasonable to interpret that a detailed explanation of the invention is required to be described with concrete examples in such a manner that a person skilled in the art can recognize that the invention has desired effect (property) within the scope which the formula described in the claim in light of the common general	efficiency of the claimed invention even with the level of technology of the technical filed at the time of application filing. (Example 2) Where claims disclose particular medicine with chemical compounds defined by preferred quality as effective properties, but the detailed description of the invention discloses that only part of the particular medicine included in the claims is confirmed to be effective as the concerned medicine and the effectiveness of the chemical compounds included in the claims cannot be recognized even based on the ordinary knowledge of the technical field at the time of application filing (Examination Guidelines Part II Chapter 4. Section 3)	example if the example is sufficient to support the technical solution as summarized in the claims. Where a claim (especially an independent claim) covers a broad protection extent and the generalization cannot be supported by only one example, the description shall give at least two different examples to support the claimed extent of patent protection. □ Where the technical solution of an invention is simple, if the part of description concerning technical solution has given a clear and complete explanation of the claimed subject matter, it is not necessary to repeat the explanation in the part of description concerning specific mode for carrying out the invention. （All see Examination Guidelines Part II, Chapter 2, Section 2.2.6）.

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	knowledge at the time of filing. (Intellectual property High Court Judgment 2005(Gyo-Ke) 10042)		
(d) Particular disclosure (claims expressed in generic terms, or claims including an expression specifying a product by its function or parameter)			

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- Definition by generic terms	o (3)The content disclosed in the detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention even in light of the common general knowledge as of the filing. The points to note when applying this type (Type (3)) are as follows. (a) The judgment should be carefully done so as not to be too restrictive on the scope of claims by the specific examples stated in the detailed explanation of the invention. (Refer to 2.2.1.2(1).) (b) A claim can be stated with expansion or generalization based on one or more specific examples in a detailed explanation of an invention. The maximum expansion or generalization varies with the characteristics of each technical field. For example, comparing the technical field where it is difficult to understand the relationships between the function or characteristics, etc. (refer to 2.2.1.2) of a product and the structure of the product (e.g. chemical compounds), and the technical field where it	o If the items disclosed in claims are means or steps to perform particular functions, but specific composition corresponding to such means or steps is not disclosed in the detailed description of the invention ,the claimed invention is not supported by the description (Examination Guidelines Part II Chapter 4. Section 3)	□ Claims are usually generalizations from one or more embodiments or examples as set forth in the description. The generalization of a claim shall not go beyond the scope of the contents disclosed in the description. If the person skilled in the art can reasonably predict that all the equivalents or obvious variants of the embodiments set forth in the description have the same properties or uses, then the applicant shall be allowed to generalize the protection extent of the claim to cover all the equivalents or obvious variants. In determining whether the generalization of a claim is appropriate, the examiner shall refer to the relevant prior art. An invention which opens up a whole new field of technology is entitled to more generality in the claims than one that is concerned with advances in a known technology. □ For example, considering such a broadly generalized claim as “a method of affecting substances with high frequency electric energy", if the description contains only one

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	is relatively easy to understand such relationships (e.g. machine field or electric field), the maximum range expansion or generalization based on the specific examples tends to be wider in the latter technical field. It is necessary to first determine to which technical field the invention to be examined pertains, and what kind of common general knowledge as of the filing exists in the relevant technical field, and then make a judgment, for each application, as to whether the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the claimed invention. (c) This type (Type (3)) is applied if, in accordance with the basic rules for examination for the substantial correspondence relationship (refer to 2.2.1.2(3)), a claimed invention is found to exceed the scope stated in the detailed explanation of the invention in such a way that a person skilled in the art could recognize that a problem to be solved by the		embodiment of “eliminating dust from gas with high frequency electric energy" without any description of methods for affecting other substances with high frequency electric energy, and a person skilled in the art is unable to determine or evaluate beforehand the effect of affecting other substances with high frequency electric energy, then the claim shall be taken as lacking support in the description. As for a broadly generalized claim relating to the whole class of products or machines, if it is fairly supported by the description, and there is no reason to suppose that the invention cannot be worked through the whole of the field claimed, then the claim may be acceptable even if its extent of protection is broad. （All see Examination Guidelines Part II, Chapter 2, Section 3.2.1）.

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	invention would be actually solved. Type (3) should not be applied independently of the problem to be solved by the invention. (Examination Guidelines Part I Chapter 1. Section 2.2.1.3 (3))		
- Definition by function	o It is possible to use expressions defining the invention by a function or characteristics, etc. so as to state an expanded or generalized form of one or more specific examples stated in the detailed explanation of the invention. If, by using these forms of expression, the claimed invention exceeds the scope stated in the detailed explanation of the invention in such a way that a person skilled in the art could recognize that a problem to be solved by the invention would be actually solved, the relevant claim constitutes a violation of Article 36(6)(i) (Refer to 2.2.1.2(3)). (Examination Guidelines Part I Chapter 1. Section 2.2.2.4 (1))	See above 3(3)(iii)	□ Technical feature defined by function in a claim shall be construed as embracing all the means that are capable of performing the function. For claim containing a feature defined by function, whether the definition by function can be supported by the description shall be examined. If the function is carried out in a particular way in the embodiments of the description, and the person skilled in the art would not appreciate that the function could be carried out by other alternative means not described in the description, or the person skilled in the art can reasonably doubt that one or more means embraced in the definition by function cannot solve the

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			technical problem aimed to be solved by the invention and achieve the same technical effect, then the definition by function as embracing the other alternative means or means incapable of solving the technical problem shall not be allowed in the claim. □ Furthermore, if the description merely states in vague terms that other alternative means may be adopted, but the person skilled in the art cannot understand what they might be or how they might be used, then definition by function in the claims is not permitted. In addition, claim of pure functional definition cannot be supported by the description, and therefore is not permitted. （All see Examination Guidelines Part II, Chapter 2, Section 3.2.1）.

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- Definition by parameter	o While an invention relating to a product defined by a numerical formula or numerical value is claimed, the detailed explanation of the invention states that a numerical formula or range of numerical values is specified for the purpose of solving the problem but does not contain a sufficient example or explanation, even in light of the common general knowledge as of the filing, so that a person skilled in the art could recognize that the problem could be solved by such numerical formula or within such range of numerical values; therefore, the content disclosed in the detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention. (Note) If a claim is not characterized by the range of numerical values but only states a desirable numerical limitation, this type of violation shall not apply even when any specific examples within such range of numerical values are not stated in the detailed explanation of the invention.	See above 3(3)(v) o In order for the ground for failure in the use of the parameter to be clearly shown, the cause and effect relationship between the parameter and effect as well as the relation between the technical problem and the parameter as its solution shall be clearly understood through comparative examples of the satisfactory cases as well as the unsatisfactory case of the parameter. (Examination Guidelines Part II. Chapter 4. Section 4.)	□ Circumstances where it is permitted to use physical/chemical parameter (s)to characterize the claim of a chemical product are: the chemical product has unclear structure and cannot be precisely characterized merely by using its chemical name, structural formula or composition. The said parameter (s)shall be clear enough（See Examination Guidelines Part II, Chapter 10, Section 4.3）.

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	(See Intellectual Property High Court Decision dated September 29, 2009 (Hei 20 (Gyo-Ke), No. 10484, a case to seek rescission of the JPO decision.) (Examination Guidelines Part I Chapter 1. Section 2.2.1.3 (3))		
(iii) Others			

COMPARATIVE STUDY OF PATENT PRACTICES ON REQUIREMENTS FOR DISCLOSURE AND CLAIMS

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(a) Broadening claim	o After an amendment is done, if the matters specifying the claimed invention extend beyond the scope of matters described in the original description, etc., the amendment is not acceptable. (Examination Guidelines Part III Section I 4.1) o If a matter, which is not described in the original description, etc., is added, in amending a matter specifying the claimed invention to be conceptually generic (for example, a matter specifying the invention is deleted) ･･･, the amendment is not acceptable because it is not made within the scope of the matters described in the original description, etc.. (Examination Guidelines Part III Section I 4.2(1)(a))	o 'New matter' refers to an element which is out of the scope of the specification or drawing(s) attached to the patent application. In this context, matters in the specification or drawing(s) attached to the application (hereinafter referred to as 'the original specification') mean the elements which are explicitly described in the specification or drawing(s), or which without any explicit description, a person skilled in the art would understand that are the same as the matters described in the specification or drawing(s) based on technical information at the time of filing the application. o The subject of assessment in addition of new matter shall be the amended specification, claims or drawing(s). The addition of new matter to any of the specification, claims or drawing(s) shall not be accepted. o The specification, claims or drawing(s) originally attached to the patent application shall be the subject of comparison of whether	□ As a principle, the amendment shall comply with Article 33. If, after the addition, change and/or deletion of part of the contents of the application, the information as seen by a person skilled in the art is different from those described in the initial application and such information cannot be directly or unambiguously derived from those described in the initial application, such amendment shall not be allowable. □ If the applicant has removed one or more of the technical features from the independent claim on his own initiative, which leads to the expanding of the extent of protection claimed in the claim; or the applicant has changed one or more of the technical features of the independent claim on his own initiative, which leads to the expanding of the extent of protection claimed in the claim, such amendment can not be deemed as the answer to the defects as indicated in the Office Action, and the manner of the amendment is not in conformity with Rule 51.3. （See

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		new matter is added to the amended specification, claims or drawing(s). In this context, the phrase 'originally attached to the patent application' refers to the submission of the specification, claims or drawing(s) along with the patent application by the filing date of the application. The matter added to the specification, claims or drawing(s) through an amendment after the filing date of the application shall not be the elements described in the specification, claims or drawing(s) originally attached to the application. (Examination Guidelines Part IV Chapter 2. Section 1.1) o The following cases are examples of broadening of the scope which are regarded as new matter (1) If amended matters are not clearly understood based on the matters described in the specification or drawing(s), the amendment shall be deemed as addition of	Examination Guidelines Part II, Chapter 8, Section 5.2.1.3）. □ When broadened claims amendment had been done, we also need to judge whether the new claims are supported by the description according to the above principle.

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		new matter. Such amendments are as follows: amendment of changing the scope of numerical limitation, amendment of changing features of an invention into a generic concept or subordinate concept, amendment of changing drawing(s), amendment of adding embodiments, or amendment of adding or changing purposes or effects of an invention.	
(b) Narrowing and sub-generic claims	oRefer to (4)(iii)(a) above. o ･･･ if a matter, which is not described in the original description, etc., is singled out, in amending it to be conceptually specific (for example, a matter specifying the invention is added), the amendment is not acceptable because it is not made within the scope of the matters described in the original description, etc.. (Examination Guidelines Part III Section I 4.2(1)(a))	o Regarding narrowing and sub-generic claims, the same criteria applies as set forth in 3.(4).(iii)(a) above.	□ As for examination on narrowing and sub-generic claims, the principle is the same as that in 3（4）（iii）（a）above. □ When narrowing and sub- generic claims amendment have been done, we also need to judge whether the new claims are supported by the description according to the above principle.

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(5) Other requirements	The statement of the scope of claims as provided in paragraph(2) shall comply with each of the following items: ..... (iii) the statement for each claim is concise; ..... (Article 36(6) of Patent Act)	o Article 42(6) of the Patent Act stipulates that the scope of claims under paragraph (2)4 shall state such matters regarded necessary to specify an invention as structures, methods, functions and materials or combination thereof to clarify what to be protected. As technology diversifies, describing the invention through the effect or operation method of an apparatus, rather than its physical structure or detailed means of the product(device) invention, would be desirable. Therefore, if an invention can be clearly specified, it shall be noted that the invention can be freely disclosed at an applicant's choice. (Note) The above-mentioned provision does not provide the ground for rejection or invalidation of a patent right. Therefore, an examiner shall not notify a ground for rejection or make a decision of rejection based on the provision. (Examination Guidelines Part II Chapter 4. Section 5)	

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(i) Conciseness	o A claim is to be used for the basis of identifying the claimed invention which is a subject of examination of the patentability requirements such as novelty or inventive step, etc., and the description requirements. The statement of a claim also serves as a document of title defining the technical scope of a patented invention accurately. Therefore, it is adequate that the statement of the claim is concise as well as complying with Article 36(6)(ii) in order for the third parties to understand the claimed invention as easily as possible. This is the purpose of Article 36(6)(iii). o Article 36(6)(iii) does not deal with the inventive concept defined by the statement of the claim but deals with the conciseness of the statement itself. Also, it does not require plural claims as a whole be concise when an application contains two or more claims. Rather, it requires each claim be stated concisely. (Examination Guidelines Part I Chapter 1.	o Article 42(4)2. of the Patent Act The claim(s) shall define the invention clearly and concisely; o Inventions are not disclosed clearly and concisely in the following cases; o Where the description of claims is too lengthy, such as the repetition of the same description and so that the description to which patent protection is sought is not clear and concise o Where an invention is not clear and concise since items irrelevant of the technical composition of the invention such as commercial benefits, regions of sale, places of sale, etc. (Examination Guidelines Part II Chapter 4 Section 4) o That an invention shall be concisely disclosed does not mean that the definition of the invention shall be concise. It means that	□ The requirement that the claims shall be concise means, on the one hand, individual claims shall be concise, and on the other hand, the claims as a whole shall be concise as well. □ For example, in one application there should not exist two or more claims that have substantially the same extent of protection. □ The expression of the claims shall be concise. Except for the technical features, a claim shall neither contain unnecessary explanations as to the cause or reason, nor shall it contain commercial advertising. □ In order to avoid undue repetition of the same content between one claim and another, where possible, the claims shall be drafted in the manner of referring to a preceding claim to the largest extent. （All see Examination Guidelines Part II, Chapter 2, Section 3.2.3）.

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	Section 2.2.3.1) o There are some cases where it is violating the requirement of Article 36(6)(iii), if a claim is expressed in alternatives (e.g., a Markush-type claim for chemical compounds) and the number of alternatives is so large that the conciseness is extremely damaged. Consideration should be taken into the followings, in determining whether the conciseness is extremely damaged or not, the following matters should be taken into account. ① In a case where a significant structural element is not shared by the alternatives, less number of alternatives should be deemed so large that the conciseness is extremely damaged than in a case where a significant structural element is shared by the alternatives. ② In a case where the alternatives are expressed in a complicated way, such as the conditional options, less number of	the description itself in the claims shall be concise. (Examination Guidelines Part II. Chapter 4. Section 4.)	

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	alternatives should be deemed so large that the conciseness is extremely damaged than otherwise. (Examination Guidelines Part I Chapter 1. Section 2.2.3.2 (2))		
4. Drawings			

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(1) Substantive questions (e.g. status of drawings as part of the disclosure)	o The description, scope of claims, drawings (Where required), and abstract shall be attached to the application. (Article 36 (2) of the Patent Act) o The description, scope of claims, drawing(s) and abstract shall be attached to the application. (Aritcle 5(2) of the Utility Model Act) o The detailed explanation of the invention shall be stated in such a manner that a person skilled in the art to which the invention pertains can carry out the claimed invention on the basis of statements of the description and drawings, as well as the common general knowledge as of the filing.. (Examination Guidelines Part I Chapter 1. Section 3.2 (1)) o The technical scope of a patented invention shall be determined based upon the statements in the claim attached to the application. (Article 70 (1) of the Patent Act)	o Article 42(2) of the Patent Act The patent application under paragraph (1) shall be accompanied by a specification, drawing or drawings (if necessary), and an abstract stating the following: 1. The title of the invention; 2. A brief explanation of the drawings; 3. A detailed description of the invention; and 4. Claim(s). o When deemed necessary for explanation of the claimed invention, drawings may be attached for a better understanding of the subject matter of the invention disclosed in a specification. o Drawings attached to a patent application shall be made under the guideline for drawings of Annexed Form No. 17 of the Enforcement Rules of the Patent Act. (Examination Guidelines Part II Chapter 2. Section 5) o A patent application may be attached with	□ The drawings are a component part of the description. (Examination Guidelines Part II Chapter II. Section 2.3) □ The function of drawings is to supplement the explanation in the text of the description with figures to enable a person to intuitively and visually understand each technical feature and the whole technical solution of the invention. For patent applications in the field of mechanics or electricity, the function of drawings is particularly outstanding. Therefore, the drawings shall clearly reflect the contents of the invention. (Examination Guidelines Part II Chapter II. Section 2.3)

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	o In the case of the preceding paragraph, the meaning of each term used in the scope of claims shall be interpreted in consideration of the statements in the description and drawings attached to the application. (Article 70 (2) of the Patent Act)	drawings when necessary. However, an application of utility model registration must be attached with drawings. (Note) Where application documents of the utility model registration application do not include drawings, it shall be deemed an illegitimate application and be returned to the applicant. o Where drawings irrelevant to the claimed invention, such as drawings of another patent application, are attached and where it constitutes the error in attachment of drawings, leading to the ground for rejection under Article 42(3) of the Patent Act, an examiner shall indicate such intention and notify the concerned ground for rejection to the applicant. Where the error in attachment of drawings does not affect the working of the invention disclosed in the claims, it shall be indicated as the reference when notifying another ground for rejection. However, the above-mentioned error in attachment of	

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		drawings shall not be used as the ground for the decision of rejection. (Attention) Where an amendment is made by submitting new drawings for the application including incorrect drawings, it could be the amendment of addition of new matters. Therefore, an examiner shall be cautious about examining the concerned application. (Examination Guidelines Part II Chapter 2. Section 5)	
(2) Formal requirements	o Drawings to be attached to a request shall be prepared in accordance with the Form 30 (Article 25 on Regulations under the Patent Act).	o Drawings to be attached to a request shall be prepared in accordance with the Form 17 (Article 21 (2) of Enforcement Rule of the Patent Act)	□ The form of the drawings is regulated in detail in Rule 18. □ The figures of drawings of the invention or utility model shall be numbered and arranged in numerical order consecutively as “Figure l, Figure 2, …". □ Reference signs not mentioned in the text of the description of the invention shall not appear in the drawings. Reference signs not mentioned in the drawings shall not appear in the text of the description. Reference signs for the same composite part shall be used consistently throughout the

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			application document. □ The drawings shall not contain any other explanatory notes, except words which are indispensable.
(3) Photographs in lieu of drawings (i.e. their status, categories accepted, conditions of acceptance, etc.)	o Drawings shall be drawn in black explicitly and not to be deleted easily, according the method of drawing. Drawing shall also not to be colored. (Form 30) o A photograph may be adopted as a drawing, if the subject is difficult to be drawn by graphics, such as micrographs, X-ray photographs, and crystal structures. o Furthermore, a color photograph is not acceptable except that it is attached as a photograph for reference. (Formality Examination Manual 24.11)	o Where drawings are difficult to be made under Annexed Form No. 17 of the Enforcement Rules of the Patent Act such as crystal structure, structure of metal, shapes of fibers, structure of particles, types of organisms, results of oscilloscope; where it is inevitable in order to clearly indicate the content of the invention; or where the embodiment of the invention is better described with pictures, relevant pictures may replace drawings. o Where an applicant submits pictures instead of drawings, pictures clear enough to be laid open in the official gazette shall be	□ The drawings shall be executed in black ink with the aid of drafting instruments including computer. The lines shall be uniformly thick and well defined, dark enough, and free from color and alterations. Engineering blueprint drawings shall not be used. (Examination Guidelines Part I Chapter I Section 4.3) □ Generally, photographs shall not be used as drawings, however, under special circumstances, for example, when a metallographic structure, histocyte, or electrophoresis pattern is to be shown, photographs may be used as drawings and they may be pasted on the sheet of drawings.

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		acknowledged and, if unavoidable, grayscale images and color pictures may be accepted. (Examination Guidelines Part II Chapter 2. Section 5)	(Examination Guidelines Part I Chapter I Section 4.3) □ Color photographs are not accepted.
5. Abstract	o Abstract shall be prepared in accordance with the Form 31. (Article 25-3 on Regulations under the Patent Act) o Abstract shall state a summary of the invention disclosed in the description, scope of claims or drawings, and the number referred to the figure which is the most suitable to contain in the Official Gazette. (Article 36 (7) of the Patent Act, Article 25-2 on Regulations under the Patent Act) o When the technical scope of the patented invention is defined, statements in the abstract attached to the application shall not	o Under Article 42(2) of the Patent Act, a patent application shall be attached with an abstract. o The system for attaching an abstract is designed to efficiently use patent information in response to an ever-increasing number of applications filed and the sophistication of technical matters. This system allows an applicant to disclose the abstract at the time of filing the application so that any person who intends to utilize the information can easily search the abstract. o An abstract cannot be used to set the scope	□ The abstract is a summary of the contents set forth in the description. It is just a sort of technical information with no legal effect. The contents of the abstract do not form a part of the initial disclosure of the invention. Therefore, they shall not serve as a basis for subsequent amendments to the description or claims, nor shall they be used to interpret the extent of protection of the patent right. (Examination Guidelines Part II Chapter II. Section 2.4) □ The abstract shall comply with the following requirements: (1) the abstract shall indicate the title of the invention and the technical field to which the

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	be taken into consideration. (Article 70 (3) of the Patent Act)	of the claimed invention for which protection is sought. Under Article 97 of the Patent stipulates that the scope of protection conferred by a patented invention shall be determined by the subject matters described in the claims. Moreover, unlike a specification referred to when determining the scope of protection of the invention, an abstract is submitted only as the technical information indicating the overview of the invention. o Moreover, matters disclosed only in an abstract cannot hold the status of another patent application under Article 29(3) of the Patent Act and adding such matters disclosed only in an abstract to a specification through amendment shall not be allowed. o Where an abstract is not attached to a patent application, the concerned application procedure shall be subject to request for amendment. Even when an abstract is poorly written without referring to the guideline for writing abstracts under Annexed Form No. 16	invention pertains, and shall be drafted in a way which allows the clear understanding of the technical problem, the gist of the technical solution to that problem, and the principal use(s) of the invention, wherein the main concentration shall be on the technical solution. The abstract may contain a chemical formula which best characterizes the invention; (2) for applications with drawings, a figure which best characterizes the main technical features of the technical solution of the invention or utility model shall be provided by the applicant or designated by the examiner as the figure accompanying the abstract, and the figure accompanying the abstract shall be one of the figures in the appended drawings; (3) the scale and the distinctness of the figure accompanying the abstract shall be as such that a reproduction with a linear reduction in size to 4cm×6cm would still enable all details to be clearly distinguished; and (4) the whole text (including punctuation marks) of the abstract shall contain no more

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		of the Enforcement Rules of the Patent Act, the abstract can be subject to request for amendment under Article 46 of the Patent Act. o Where irregularities are not addressed despite a request for amendment, an examiner may invalidate the concerned application procedure in accordance with Article 16 of the Patent Act. (Note) It shall be noted that when an abstract is incorrectly stated, an examiner shall not notify a ground for rejection citing that it has failed to meet the requirement under Article 42(3) or (4) of the Patent Act. (Examination Guidelines Part II Chapter 2. Section 3)	than 300 Chinese characters, and no commercial advertising shall be presented in the abstract. (Examination Guidelines Part II Chapter II. Section 2.4)

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6. Requirements for Disclosure and Claims in Special Fields		[Note] o Examination Guidelines for inventions of special fields are managed by corresponding examination divisions. The following guidelines are referred in this report. - Examination Guideline for computer related inventions - Examination Guideline for organic and non-organic chemical compounds and ceramics inventions - Examination Guideline for medical and cosmetic inventions - Examination Guideline for biotechnology o These examination guidelines are expected to be incorporated into KIPO's examination guideline in 2014.	

COMPARATIVE STUDY OF PATENT PRACTICES ON REQUIREMENTS FOR DISCLOSURE AND CLAIMS

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(1) Computer program	o Categories of Software-Related Inventions (1)Invention of a process When a software-related invention is expressed in a sequence of processes or operations connected in time series, namely procedure, the invention can be defined as an invention of a process (including an invention of a process of manufacturing a product) by specifying such a procedure. (2)Invention of a product When a software-related invention is expressed as a combination of multiple functions performed by the invention, the invention can be defined as an invention of a product by specifying such functions. A program or data can be defined in the following manners: (a)“A computer-readable storage medium having a program recorded thereon” can be defined as “an invention of a product.” “A computer-readable storage medium having structured data recorded thereon” can also be defined as an invention of a product, where processing performed by a computer is	o The case where software data processing is specifically activated by using a hardware refers to the case where a software is read by a computer and then the data operation or processing is activated with a specific means of cooperation of software and hardware according to the purpose and therefore, the particular data processing apparatus (device) or the operation method is established based on the purpose. The specific means of cooperation of software and hardware or the operation method according to the purpose can be considered as the creation of technical ideas using the rules of nature. Therefore, where software data processing is specifically realized by using a hardware, the data processing apparatus (device) operated in cooperation with the concerned software and the computer-readable media recording the operation method and the concerned software are the creation of technical ideas utilizing the rules of nature. o Generally, business model inventions refer	□ Computer programs per se said in this Chapter mean a coded instruction sequence which can be executed by a device capable of information processing, e.g. , a computer, so that certain results can be obtained, or a symbolized instruction sequence, or a symbolized statement sequence, which can be transformed automatically into a coded instruction sequence. Computer programs per se include source programs and object programs. (Examination Guidelines Part II Chapter 9, Section 1.) □ The invention relating to computer programs said in this Chapter refers to solutions for solving the problems of the invention which are wholly or partly based on the process of computer programs and control or process external or internal objects of a computer by the computer executing the programs according to the above mentioned process. The said control or process of external objects in □ cludes control of certain external operating process or external operating

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	specified by the data structure recorded thereon. [Example 1] "A computer-readable storage medium having a program recorded thereon; where the program makes the computer execute procedure A, procedure B, procedure C, …" [Example 2] "A computer-readable storage medium having a program recorded thereon; where the program makes the computer operate as means A, means B, means C, ..." [Example 3] "A computer-readable storage medium having a program recorded thereon; where the program makes the computer realize function A, function B, function C..." [Example 4] "A computer-readable storage medium having data recorded thereon; where the data comprise data structure A, data structure B, data structure C, ..." (b)"A program" which specifies a multiple of functions performed by a computer can be defined as "an invention of a product." [Example 5] "A program which makes a computer execute procedure A, procedure B,	to inventions on novel business systems or business methods realized by using information technology. To be recognized as business model inventions, software data processing on the computer should be specifically realized by using a hardware. (Examination Guideline for computer related inventions, Section 2.2.1) O Allowable categories for computer related inventions (1) Process invention: When computer related inventions can be described in a series of processing or operation expressed in the time sequence, in other words in steps, they can be disclosed as method invention based on the specification of the steps in claims. (2) Product invention : When computer related inventions can be expressed as multiple functions to perform the concerned inventions, they can be disclosed as the inventions of products specified with the concerned functions in claims. (3)Program recording medium : A computer	device, and process or exchange of external data, etc.; the said control or process of internal objects includes improvement of internal performance of computer systems, management of internal resources of computer systems and improvement of data transmission, etc. Solutions relating to computer programs do not necessarily include changes to computer hardware. The claims of an invention application relating to computer programs may be drafted as process claim or product claim, i. e., the apparatus for executing the process.

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	procedure C, ..." [Example 6] "A program which makes a computer operate as means A, means B, means C, …" [Example 7] "A program which makes a computer realize function A, function B, function C, …" (Examination Guidelines Part VII Chapter 1. Section 1.1.1) o The basic concept to determine whether software-related invention constitutes "a creation of technical ideas utilizing a law of nature" is as follows. (1) Where "information processing by software is concretely realized by using hardware resources," the said software is deemed to be "a creation of technical ideas utilizing a law of nature." (See 3. Examples 2-1 to 2-5 in this Chapter.) [Explanation] "Information processing by software is concretely realized by using hardware resources" means that, as a result of reading	readable medium carrying the concerned program for execution or distribution of the program which can be read with the computer can be disclosed as product invention in claims. (4) Data recording medium : A computer readable medium carrying the data having a structure by which the function of the computer is specified can be disclosed as product invention in claims. (Examination Guideline for computer related inventions, Section 1.1)	

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	the software into the computer, the information processing equipment (machine) or operational method thereof particularly suitable for a use purpose is constructed by concrete means in which software and hardware resources are cooperatively working so as to realize arithmetic operation or manipulation of information depending on the said use purpose. Since “the said information processing equipment (machine) or operational method thereof particularly suitable for the use purpose” can be said to be qualified as "a creation of technical ideas utilizing a law of nature," where "information processing by software is concretely realized by using hardware resources," the said software is deemed to be "a creation of technical ideas utilizing a law of nature." Reference: To be qualified as "a creation of technical ideas utilizing a law of nature," a claimed invention must be concrete enough to accomplish a certain purpose. (A technology must possess sufficient concrete means to		

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	accomplish a certain purpose and can be practically used, … so that it is objective.) [Hei 9 (Gyo Ke) 206 (Judgement: May 26, 1999)] (2) Furthermore, the information processing equipment (machine) and operational method thereof which cooperatively work with the said software satisfying the above condition (1), and the computer-readable storage medium having the said software recorded thereon are also deemed to be "creations of technical ideas utilizing a law of nature." (Examination Guidelines Part VII Chapter 1. Section 2.2.1)		
(i) Enablement requirement	o The detailed explanation of the invention shall be stated in such a manner that a person who has ability to use ordinary technical means for research and development, and has ability to exercise ordinary creative activity in the field of software-related inventions can carry out the claimed invention on the basis of the description in the specification and drawings taking into consideration the common general	o See 2(5)(i), 2(5)(ii) above for general enablement requirements. o Cases where enablement requirement is not met for computer program invention. (1)Where the detailed description of the invention only abstractly discloses the technical steps or functions corresponding to the claimed invention and the claimed invention cannot be worked because the	□ □ The description of an invention application relating to computer programs shall, in addition to outlining the technical solution of the invention as a whole, illustrate the concept of design and the technical features of the computer program concerned and the mode of exploitation to produce the technical effect in a clear and complete manner. In order to outline the main technical

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	knowledge as of the filing. (Examination Guidelines Part VII Chapter 1. Section 1.2.1) o When the invention cannot be carried out as a result of the following expression, there are some occasions where the invention cannot be carried out: ・ When not commonly used technical terms, abbreviations, symbols, etc. are used in the specification without definition, so that the invention cannot be carried out ・ When the procedure or function corresponding to those stated in a claim is described merely in an abstract or functional manner in the detailed explanation of the invention, so that it is unclear how the procedure or function is implemented or realized by hardware or software (Examination Guidelines Part VII Chapter 1. Section 1.2.1.1)	detailed description of the invention fails to disclose how the steps or functions are executed or realized with a hardware or software. (2) Where the detailed description of the invention simply describes a hardware or software realizing the function of the invention in claims with a functional block diagram or outline flowchart and the claimed invention cannot be worked because of the unclear description of the functional block diagram or outline flowchart on how the software and hardware are organized (3) Where claims specify functions, but the detailed description of the invention describes such functions with a flowchart and the claimed invention cannot be worked because of unclear correlation between the functions in claims and the flowchart of the detailed description of the invention (4) Where the detailed description of the invention and the drawing(s) contain an error of creating an infinite loop and a person skilled in the art cannot easily work the	features of the computer program clearly and completely, the principal flow chart of the computer program shall be presented in the drawings of the description. An explanation of every step of the computer program shall be made in the description in natural language based on the said flow chart in chronological order. The main technical features of the computer program shall be described in the description to such extent that a person skilled in the art can, on the basis of the flow chart presented in the description and explanation thereof, produce the computer program capable of producing the technical effect as described in the description. In order to describe clearly, where necessary, the applicant may briefly extract some important parts from the computer source program, in marked program language that is customarily used, to serve as a reference, but it is not necessary to provide the whole source program. □ If an invention application relating to computer programs includes contents

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		claimed invention (Examination Guideline for computer related inventions, Section 1.2.2)	concerning changing the hardware structure of computer devices, the hardware entity structure diagram of the said computer devices shall be presented in the drawings of the description, and the component parts of the hardware of the said computer devices and the mutual relationships thereof shall be described in the description, based on the said hardware entity structure diagram, in clear and complete manner so as to enable a person skilled in the art to carry out the invention. (Examination Guidelines Part II Chapter 9, Section 5.1) □ The claims of an invention application relating to computer programs may be drafted as process claim or product claim, i. e., the apparatus for executing the process. No matter what kind of claim it is drafted as, the claim shall be supported by the description, represent the technical solution of the invention in its entirety and outline the essential technical features for resolving the technical problems, and do not describe

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			resumptively the functions of the computer program and the effects those functions can produce only. If it is drafted as a process claim, the various functions to be performed by the computer program and the way to perform the functions shall be described in detail according to the steps of the process. If it is drafted as an apparatus claim, the various component parts and the relationships among them shall be specified, and a detailed description shall also be given on the component parts by which the various functions of the computer program are performed, and on how these functions are performed. □ If an apparatus claim is drafted on the basis of computer program flow completely and according to the way completely identical with and corresponding to each step in the said computer program flow, or according to the way completely identical with and corresponding to the process claim reflecting the said computer program flow, i.e. each component in the apparatus claim completely

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			corresponds to each step in the said computer program flow or each step in the said process claim, then each component in the apparatus claim shall be regarded as function modules which are required to be built to realize each step in the said computer program flow or each step in the said process. The apparatus claim defined by such a group of function modules shall be regarded as the function module architecture to realize the said solution mainly through the computer program described in the description rather than entity devices to realize the said solution mainly through hardware. (Examination Guidelines Part II Chapter 9, Section 5.2)
(ii) Computer program list and computer program flowchart	o When the invention cannot be carried out as a result of the following expression, there are some occasions where the the invention cannot be carried out: ・ When hardware or software which realizes the function of the invention is explained with functional block diagrams or general flow charts in the detailed explanation of the invention, since the explanation is not	o The term "invention" means the highly advanced creation of technical ideas utilizing rules of nature (Article 2(1) of Patent Act) o Computer program invention as patentable subject matter (1) Where data processing by a software is specifically activated by using a hardware, patentable subject matter of the invention	□ □ In order to outline the main technical features of the computer program clearly and completely, the principal flow chart of the computer program shall be presented in the drawings of the description. An explanation of every step of the computer program shall be made in the description in natural language based on the said flow chart in chronological

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	sufficient to understand how hardware or software is structured, the invention cannot to be carried out. ・ When an invention is defined using functional terms whereas the embodiment of an invention is explained using a flow chart, the relationship between the said function defined in the claim and the said flow chart in the detailed explanation of the invention is unclear. As a result, the invention cannot to be carried out. (Examination Guidelines Part VII Chapter 1. Section 1.2.1.1) o In principle, program listings should not be included in the specification or drawings. However, if they are short excerpts written in a computer language generally known to a person skilled in the art and helpful for understanding the invention, such listings are allowed to be included. ("Program listings" can be submitted and filed as reference material. However, the specification cannot be amended on the basis of such reference	includes information processing apparatus(device) operated in cooperation with the concerned software, operation methods and computer readable media carrying the software. (2) Where software data processing is specifically activated by using a hardware in the claimed invention, in other words, the concerned software and hardware realize the data calculation or processing for the purpose of use with a specific means of cooperation of the software and hardware to the particular data processing apparatus(device) or operation methods that meet the purpose of use, the concerned invention is patentable subject matter. (3) Where software data processing is not specifically activated by using a hardware, the concerned invention is not patentable subject matter. (4) Image data filmed on a digital camera, sports program drawn with document creation device, computer program lists and mere presentation of data are not patentable	order. The main technical features of the computer program shall be described in the description to such extent that a person skilled in the art can, on the basis of the flow chart presented in the description and explanation thereof, produce the computer program capable of producing the technical effect as described in the description. In order to describe clearly, where necessary, the applicant may briefly extract some important parts from the computer source program, in marked program language that is customarily used, to serve as a reference, but it is not necessary to provide the whole source program. (Examination Guidelines Part II Chapter 9, Section 5.1)

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	material.) (Examination Guidelines Part VII Chapter 1. Section 1.2.2 (3))	subject matter. (5) When programming language invention is claimed, it constitutes an artificial decision, not the creation of technical ideas using the rules of nature. Therefore, it is not deemed as an invention. (6) A claimed invention of computer program list in itself constitutes the mere presentation of data and therefore, it is not the creation of technical ideas using the rules of nature and is not deemed as an invention. (Examination Guideline for computer related inventions, Section 2.2)	
(2) Chemistry			

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(i) Chemical Compound invention		o Chemical compounds Compounds refer to chemical material consisting of more than two chemical elements include organic compounds, inorganic compounds and organo-metallic compounds. Organic compounds mean compounds consisting of carbon, hydrogen and metallic elements (oxygen, nitrogen, chlorine and fluorine) and include acyclic compounds or carbocylic compounds, heterocyclic compounds and organo-metallic compounds. Inorganic compounds refer to compounds containing elements except for carbon and relatively simple compounds consisting of carbon and include non-metallic elements and their compounds; ammonia, cyanide and their compounds; alkali metal (compounds of lithium, sodium, potassium, rubidium, cesium or francium); compounds of metallic beryllium, magnesium, aluminum, calcium, strontium, barium, radium, torium or metallic	

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		compounds of rare earth resources. (Examination Guideline for organic and non-organic chemical compounds and ceramics inventions, Chapter 1 Section 3)	
(a) Enablement requirement	o In the case of an invention of a chemical compound, for instance, the invention should be deemed as clearly explained if the chemical compound is expressed either by name or by chemical structural formula. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (2) ①) o In the technical field where it is difficult to predict the structure, etc. of a product from the function or characteristic, etc. of the product (e.g. chemical compounds), if a person skilled in the art cannot understand how to make another product defined by its function or characteristic, etc. other than products of	o See 2(5)(i), 2(5)(ii) above for general enablement requirements. o Chemical inventions might vary based on the content of the concerned invention and the level of technology, but unlike machinery device whose effect can be easily understood and realized from the subject matter of the invention, a person skilled in the art would not easily understand and realize the effect of the invention unless the experiment example suggesting the experimental data is not stated due to low predictability or realizability.	□ Chemistry is an experimental science, and a number of inventions in this field need to be verified by experimentation, therefore, the description generally shall include embodiments, incase of an invention of a product, for instance, those which specifically show how to make the product and how to use it. (Examination Guidelines Part II Chapter 10, Section 3.4) □ The word “chemical product" includes compound, composition, and chemical product which cannot be clearly described by its structure and/or composition. Where the claimed invention is a chemical product itself, the description shall describe the

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	which manufacturing method is concretely stated in the detailed explanation of the invention (or those which can be made from these products taking into account the common general knowledge), the statement of the detailed explanation of the invention is violating the enablement requirement. (For example, where a person skilled in the art who intends to work the invention would have to make trials and errors, beyond the reasonably-expected extent.) (Examination Guidelines Part I Chapter 1. Section 3.2.1 (2)②) o In the case of inventions in technical fields where it is generally difficult to infer how to make and use a product on the basis of its structure (e.g., chemical compounds), normally one or more representative embodiments or working examples are necessary which enable a person skilled in the art to carry out the invention. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (5))	o Therefore, chemical substance use invention can be deemed to be realized when the effect of the invention is described in the detailed description of the invention and at the same time, the description requirement of specification shall be met. Especially, as for medicinal use invention, description of medical data proving that the subject matter of the invention contains the same medical effect or description detailed enough to replace such medical data shall be disclosed unless particular conditions exist such as the certain mechanism indicating the medical effects disclosed in the specification before the application filing is disclosed. (Examination Guidelines Part II. Chapter 3. Section 2.3.2.) o Chemical compound inventions (1) Compound verification data such as element analysis value, nuclear magnetic resonance(NMR) data, melting point and boiling point should be disclosed in the	identification, preparation and use of the chemical product. (1)Identification of a chemical product □ As for the invention of a compound, the description shall indicate the chemical name and the structural formula (including various function groups, molecule steric-configuration and so on) or the molecular formula of said compound. The explanation of the chemical structure shall be clear enough to enable a person skilled in the art to identify the compound. In order to clearly identify the claimed compound, the description shall describe the chemical/physical property parameters (such as the various qualitative or quantitative data and spectrum, etc.) relating to the technical problem to be solved by the invention. Moreover, in the case of a high molecular compound, besides the name, the structural or molecular formula of its repeating units shall be described according to the same requirements as those of the abovementioned compound, the description shall properly state its molecular weight and

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	o If a claim is defined in an alternative way by a Markush-type formula, whereas only a mode for carrying out a part of the claimed alternatives is stated in the detailed explanation of the invention, and if the examiner can show well-founded reasons that a person skilled in the art would be unable to carry out the rest of the alternatives which are not stated in the mode for carrying out the invention even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, then, the detailed explanation of the invention cannot be deemed to be stated clearly and sufficiently as to enable a person skilled in the art to work the invention. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (6) ③)	detailed description of the invention if it is doubted that the concerned compound is made only based on the description of the manufacturing methods on the grounds that the manufacturing method of the compound is particularity complicated or it involves notable adverse reaction. Inventions with polymorphic crystalline forms should be confirmed to have polymorphic crystalline forms based on the description of verification data(XRD data, DSC data, IR data) or that of physical and chemical characteristics in the detailed description of the invention. Even though no detailed description on the manufacturing method of novel compounds exists, the manufacturing method of the concerned compound should be clearly disclosed, except for the case where a skilled person in the art can produce the material based on the specification and the common technical knowledge as of the filing. (2) As for inventions of novel compounds, embodiments with specified technical means	the distribution thereof, the arrangement state of its repeating units (such as homopolymeric, copolymeric, block-polymeric or graft-polymeric state), etc. If the high molecular compound cannot be completely identified by these structural elements, the property parameters, such as crystallinity, density and second-order transition point, shall also be described. □ As for the invention of a composition, besides the components of the composition, the description shall describe the chemical and/or physical state of each component, the range of selection of each component, the range of content of each component and its effect on the property of the composition. As for a chemical product which cannot be clearly described merely by its structure and/or composition, the description shall further state the product by proper chemical/physical parameters and/or the manufacturing process, so that the claimed chemical product can be clearly identified. (2)Preparation of chemical product

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		should be disclosed. Where patent claims of such compounds are disclosed comprehensively, best modes by each group of compounds should be disclosed, except for the case where a skilled person in the art can understand the detailed content of the invention based on the specification and the common technical knowledge as of the filing. Where claims are disclosed in Markush type and the detailed description of the invention only discloses embodiments concerning parts of components out of all the components disclosed in claims, if a skilled person in the art finds based on the description of the concerned embodiment that he/she cannot easily work the invention regarding other components based on the specification and the common technical knowledge as of the filing, the examiner should notify the ground for rejection based on the ground that the invention in the claims cannot be easily worked only based on the embodiments described in the detailed description of the invention.	The description of a chemical product invention shall describe at least one preparation method and disclose the raw materials, procedures, conditions and specially adapted equipment used for carrying out the method so as to make it possible for a person skilled in the art to carry it out. In the case of a compound invention, the example of its preparation is usually required. (3)Use and/or its technical effect of chemical product As for a chemical product invention, the use and/or its technical effect of the product shall be completely disclosed. Even if the structure of the compound has been confirmed for the first time, at least one use of the compound shall be described. If a person skilled in the art is unable, on the basis of the prior art, to predict that the use and/or its technical effect stated in the invention can be carried out, the description shall sufficiently provide qualitative or quantitative data of experimental tests for the person skilled in the art to be convinced that

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		(3) As for compound inventions, more than one technically significant utility of the invention should be disclosed. (Examination Guideline for organic and non-organic chemical compounds and ceramics inventions, Chapter 2 Section 2.1) o Chemical compound manufacturing process inventions As for inventions of compound manufacturing methods, their starting material, manufacturing process and produced material should be disclosed since a person skilled in the art should be able to produce the concerned compound based on the manufacturing method. (Examination Guideline for organic and non-organic chemical compounds and ceramics inventions, Chapter 2 Section 2.2)	the technical solution of the invention enable the use to be carried out and/or the effect as expected to be achieved. □ As for the property data showing the effect of the invention, the method used to measure it shall be specified when various measuring methods for it in the prior art yield different results. If it is a special method, it shall be explained in detail to enable a person skilled in the art to carry it out. (Examination Guidelines Part II Chapter 10, Section 3.1)

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(b) Description which supports use for enablement	o In the case of the invention of a chemical compound, it is necessary to state more than one specific use with technical significance in order to show that the chemical compound concerned can be used. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (2) ③)	o See 3(4) above for support in description requirements in general. o Cases where claimed invention is not supported by the description in chemical compound inventions (1) Where claims disclose the invention of a compound and the compound is described in Markush type containing multiple components, however, the detailed description of the invention only discloses the detailed embodiment of manufacturing the compound with specific structures, but a skilled person in the art cannot clearly understand the compound with other structures included in the components of the invention, the examiner shall present the ground for the decision and notify the ground for rejection indicating that the compound is not supported by the detailed description of the invention. (2) Where claims disclose a treatment for particular purpose containing the compound defined with the preferred properties as	□ As for a use invention of a chemical product, the description shall describe the chemical product to be used, the method for using the product and the effect to be achieved to enable a person skilled in the art to carry it out. If the product to be used is a new chemical product, the statement of the product in the description shall comply with relevant requirements in Section 3.1 of this Chapter. If a person skilled in the art can not predict the use according to the prior art, the description shall sufficiently provide data of experimental tests for a person skilled in the art to be convinced that the product is useful for said use and can solve the technical problem or achieve the technical effect as expected. (Examination Guidelines Part II Chapter 10, Section 3. 3) □ The invention of a new use for a known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of enablement cannot be met. □ (Examination Guidelines Part II

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		medicinal agent, but the effectiveness of other claimed compounds cannot be recognized even with the common knowledge in the technical field as of the filling, the examiner shall present the ground for the decision and notify the ground for rejection indicating that the compound is not supported by the detailed description of the invention. (Examination Guideline for organic and non-organic chemical compounds and ceramics inventions, Chapter 2 Section 3.1) o Chemical inventions might vary based on the content of the concerned invention and the level of technology, but unlike machinery device whose effect can be easily understood and realized from the subject matter of the invention, a person skilled in the art would not easily understand and realize the effect of the invention unless the experiment example suggesting the experimental data is not stated due to low predictability or realizability. o Therefore, chemical substance use invention	Chapter 2, Section 2.1.3)

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		can be deemed to be realized when the effect of the invention is described in the detailed description of the invention and at the same time, the description requirement of specification shall be met. (Examination Guidelines Part II. Chapter 3. Section 2.3.2.)	
(ii) Medical invention	o In this chapter, matters requiring special judgment and handling in examining patent application relating to medicinal inventions are mainly explained. A medicinal invention here means “an invention of a product” which intends to provide a new medicinal use (Note 2) of a material (Note 1), based on discovering an unknown attribute of the material. (Note 1) “A material means a component used as an active ingredient, including a compound, a cell, a tissue and a chemical substance (or a group of chemical substances) whose chemical structure is not specified, such as an extract from a natural product,	o Medical inventions (1) Medicine refers to chemicals used for the purpose of diagnosis, treatment, mitigation, cure or prevention of a disease of humans and animals and the followings shall be excluded. - Apparatus(including machinery) - Cosmetics - Foods, (2) Whether an invention constitutes medical invention shall be determined based on the description of the purpose as medicine in claims. Even when claims do not clearly disclose the purpose of the invention as medicine, if the detailed description of the invention discloses the purpose of the	

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	and a combination thereof. Hereinafter, the material concerned is referred to as "compounds etc." (Note 2) "A medicinal use" means (i) an application to the specific disease or (ii) an application to the specific disease in which dosage and administration such as dosing time, dosing procedure, dosing amount or administration areas (hereinafter referred to as "dosage and administration") is specified. Refer to Part I or Part II for those matters not explained in this Chapter in relation to description requirements of the Description and the Claims, and requirements for patentability. (Examination Guidelines Part VII Chapter 3.)	invention as medicine and such descriptions can affect the scope of the right as medicine through subsequent amendments, the concerned invention shall be treated as medical invention. (3) Medicines of natural products refer to drugs containing products obtained by processing, extracting animals, plants or microorganism present in nature as medicinal agent. Natural extracts comprise a group of complex components which are obtained by methods traditionally passed down in the form of macerating, digesting, boiling water extraction and so on; ultrasonic extraction, extractions by supercritical fluid; fractionated extraction by organic solvent or chromatography. (Examination Guideline for medical and cosmetic inventions, Chapter 1 Section 3) o Medical inventions as patentable subject matter (1) Inventions on the methods(included to medical practices) of diagnosing, treating,	

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		mitigating and curing or preventing a disease of humans or improving the health conditions are not deemed industrially applicable. Besides the overall physical medical practices performed on the patients in the forms of diagnosis, treatment and surgery, preventive measures(example: anesthetic method) for such purposes are not industrially applicable and the treatment methods on contraceptives and child delivery for humans shall be treated the same as those of treatment or diagnosis. (2) Inventions on methods of diagnosing, treating, mitigating and curing or preventing a disease of mammals except for humans as well as methods of growth enhancement by using medicines are deemed industrially applicable. (3) Inventions of producing medicine with liquids already extracted, removed or released from human bodies such as blood, plasma, serum, urine, feces, pus, sap, placenta, tumor, hair, nail, etc. are deemed industrially applicable. (4) Inventions of producing materials for	

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		medicine inside human bodies by using particular materials in human bodies and inventions of extracting materials for medicine formed inside human bodies by using particular materials in human bodies are not deemed industrially applicable if they are not clearly distinguished from the methods of diagnosing, treating, mitigating and curing or preventing a disease of humans. (Examination Guideline for medical and cosmetic inventions, Chapter 3 Section 1)	
(a) Enablement requirement	o As a medicinal invention resides in technical field where it is generally difficult to infer how to make and use a material on the basis of its structure and its name, normally one or more representative embodiments or working examples are necessary in order to state the detailed explanation of the invention so as to enable a person skilled in the art to work the invention, except the case where a person skilled in the art can manufacture the compounds etc. and can use the compounds etc. for medicinal use, in the light of common general technical knowledge as of the filing.	o See 2(5)(i), 2(5)(ii) above for general enablement requirements. o Enablement requirements for medical inventions (1) Medicinal Effect Use inventions on medicines shall disclose medicinal effects to support the medical purpose in the specification at the time of the filing. In principle, medicinal effects need to be supported with results of clinical trials, however, animal testing or in vitro experiments can replace clinical trials	□ For a new pharmaceutical compound or pharmaceutical composition, not only its specific medical use or pharmacological action, but also its effective amount and the method of application shall be described. If a person skilled in the art is unable, on the basis of the prior art, to predict that said use or action stated in the invention can be carried out, the qualitative or quantitative data of the laboratory test (including animal test)or clinical test shall be sufficiently provided for the person skilled in the art to be convinced that the technical solution of the

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	(Examination Guidelines Part VII Chapter 3. Section 1.2.1)	depending on the content of the invention. 【Note 1】Unless special conditions exist such as where pharmacological mechanisms of use inventions on medicine with requirement of disclosure of medicinal effects are clearly disclosed prior to the filing, only if trial examples containing pharmacological data or detailed description of medical effects in particular materials are present, such use inventions on medicine shall be deemed to be complete and meet the description requirement of the specification. (Omitted) The claimed invention in the concerned case regarding “medical compounds containing piperazine derivatives for treatment of hypermetamorphosis” shall not be deemed to disclose medicinal effects in the pharmacological data in the specification and describe medicinal effects in detail to replace such data even though its pharmacological mechanisms are clearly disclosed. (Supreme Court, 2006. 2. 23 Ruling, 2004 Hu 2444 Decision) Selection inventions shall disclose medicinal	invention can solve the technical problem or achieve the technical effect as expected. The description shall describe effective amount, method of application or method of formulation to such an extent that the person skilled in the art can carry it out. (Examination Guidelines Part II Chapter 10, Section 3.1) □ The invention of a new use for a known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of enablement cannot be met. □ (Examination Guidelines Part II Chapter 2, Section 2.1.3) □

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		effects clear enough to help a skilled person in the art to understand the effect of the selective inventions even though the detailed description of the invention does not necessarily have to disclose the comparative test results to specifically identify the difference in quantitative or qualitative effects between the selection inventions and the prior art. (2) Other Requirements a. In principle, the specification of use inventions on medicine shall disclose the effective dose and administration methods. b. The specification shall disclose the content on medicine manufacture clearly enough for a person skilled in the art to easily work the invention. c. Where toxicity is particularly concerned, the examiner may request the result of acute toxicity test during the prosecution process. (Examination Guideline for medical and cosmetic inventions, Chapter 2 Section 1)	

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		o Chemical inventions might vary based on the content of the concerned invention and the level of technology, but unlike machinery device whose effect can be easily understood and realized from the subject matter of the invention, a person skilled in the art would not easily understand and realize the effect of the invention unless the experiment example suggesting the experimental data is not stated due to low predictability or realizability. o Therefore, chemical substance use invention can be deemed to be realized when the effect of the invention is described in the detailed description of the invention and at the same time, the description requirement of specification shall be met. Especially, as for medicinal use invention, description of medical data proving that the subject matter of the invention contains the same medical effect or description detailed enough to replace such medical data shall be disclosed unless particular conditions exist such as the	

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		certain mechanism indicating the medical effects disclosed in the specification before the application filing is disclosed. (Examination Guidelines Part II. Chapter 3. Section 2.3.2.)	
(b) Description which supports use for enablement	o In the case of use inventions (e.g., medicine) using the characteristics of a product etc., the working examples supporting the use are usually required. (Examination Guidelines Part I Chapter 1. Section 3.2.1 (5)) o As for working examples supporting the medicinal use, a description of the result of the pharmacological test is usually required (Refer to Examination Guidelines, Part I, Chapter 1, 3.2.1 (5)). The following examples display concrete practices regarding the description of the result of the pharmacological test sufficient to support a	o See above 6(2)(ii)(a)	

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	pharmacological effect. (1) Description of the Result of the Pharmacological Test Since the result of the pharmacological test is to confirm the pharmacological effect of compounds etc. of the claimed medicinal invention, all of the followings should be made sufficiently clear, in principle; (i) which compounds etc. are (ii) applied to what sort of the pharmacological test system, (iii) what sort of result is obtained, and (iv) what sort of relationship the pharmacological test system has with the medicinal use of the claimed medicinal invention. It should be noted that the result of the pharmacological test should be described with numerical data as a general rule, but when the result cannot be described with the numerical data due to the nature of the pharmacological test system, an objective description equivalent to the numerical data for example, a description of the objective observation result by a medical doctor may be accepted. Furthermore, a clinical test, an		

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	animal experiment, and in-vitro test are employed as the pharmacological test system. (2) Examples of Cases where Reasons for Refusal are Notified (a) A case in which the result of the pharmacological test is not described Generally, since it is difficult to predict whether the compounds etc. are actually usable for a specific medicinal use from only the structure and name of the compounds etc., it is still difficult for a person skilled in the art to predict whether the compound etc. are actually usable for the specific medicinal use when an effective dose, a mode of administration, and formulation method are described in the description as filed but the result of the pharmacological test is not described. Accordingly, in such a case, in principle, reasons for refusal are notified. It should be noted that even if the result of the pharmacological test is submitted afterward, the reasons for refusal are not overcome. (Tokyo High Court Judgment Hei 10.10.30		

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	(Heisei 8 (Gyo Ke) 201) "Judgment on Antiemetic Drug": Refer to Examination Guidelines Part I, Chapter 1 Case 8: Tokyo High Court Judgment Hei 14.10.1 (Heisei 13 (Gyo Ke) 345: Tokyo High Court Judgment Hei 15.12.22 (Heisei 13 (Gyo Ke) 99) (b) A case in which the existence of a pharmacological effect of the compounds etc. of a claimed medicinal invention can not be confirmed, as the compounds etc. used in the pharmacological test are not specified It should be noted that, in many cases the existence of the pharmacological effect of the compounds etc. of the claimed medicinal invention cannot be confirmed; for example, when the compounds etc. used in the pharmacological test system described in the description as filed are merely stated as being "any of a plurality of the compounds etc." and it is not concretely specified which compounds etc. are actually used, this case comes under the case where (i) in "(1) Description of the Result of the Pharmacological Test" is not		

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	clear. (Examination Guidelines Part VII Chapter 3. Section 1.2.1)		
(3) Micro-biotechnology		o Micro-biotechnology inventions include following items; DNA, gene, protein, cDNA, primer, probe, SNP, Homology, vector, transformation, cleavage map, vector map, antisense nucleotide, hybrid cell, microarray, stem cell, biomarker, epitope. (Examination Guideline for biotechnology, Chapter 1 Section 1) o See above 6(2)(ii) for patentable subject matter	

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(i) Gene technology	Claim In a claim, a gene, a vector, a recombinant vector, a transformant, a fused cell, a recombinant protein and a monoclonal antibody should be described as indicated below. (1) Genes ① A gene may be described by specifying its nucleotide sequence. ② A structural gene may be described by specifying an amino acid sequence of the protein encoded by the said gene. ③ A structural gene may be described by a combination of the terms “substitution, deletion or addition” or “hybridize” with functions of the gene, and if necessary, origin or source of the gene in a generic form (provided that the claimed invention is clear and the enablement requirement is met). ④ A gene may be described by specifying functions, physiochemical; properties, origin or source of the said gene, a process for producing the said gene, etc. (provided that		

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	the claimed invention is clear and the enablement requirement is met). (2) Vectors A vector should be described by specifying a base sequence of its DNA, a cleavage map of DNA, molecular weight, number of base pairs, source of the vector, process for producing the vector, function or characteristics of the vector,etc. (3) Recombinant vectors A recombinant vector may be described by specifying at least one of the gene and the vector. (4) Transformants A transformant may be described by specifying at least one of ① its host and ② the gene which is introduced (or the recombinant vector) (provided that the claimed invention is clear and the enablement requirement is met).		

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	(5) Fused cells A fused cell may be described by specifying parent cells, function and characteristics of the fused cell, or a process for producing the fused cell, etc. (6) Recombinant proteins ① A recombinant protein may be described by specifying an amino acid sequence or a base sequence of structural gene encoding the said amino acid sequence. ② A recombinant protein may be described by a combination of the terms “substitution, deletion or addition” and functions of the recombinant protein, and if necessary, origin or source of the recombinant protein in a generic form (provided that the claimed invention is clear and the enablement requirement is met). ③ A recombinant protein may be described by specifying functions, physiochemical,		

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	origin or source of the said recombinant protein, a process for producing the said recombinant protein, etc. (provided that the claimed invention is clear and the enablement requirement is met). (7) Monoclonal antibodies A claim directed a monoclonal antibody may be defined by specifying any of antigen recognized by it, hybridoma which produces it, or cross-reactivity, etc. (Examination Guidelines Part VII Chapter 2. Section 1.1.1)		

COMPARATIVE STUDY OF PATENT PRACTICES ON REQUIREMENTS FOR DISCLOSURE AND CLAIMS

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(a) Enablement requirement	(1) Invention of a Product o For an invention of a product, the definition of "being able to carry out the invention" is to make and use the product. Therefore, the "mode for carrying out the (claimed) invention" should be described in so that this becomes possible. Also, the said invention of a product should be explained clearly in the detailed explanation of the invention. Therefore, an invention of a gene, a vector, a recombinant vector, a transformant, a fused cell, a recombinant protein, a monoclonal antibody, etc. should be described as follows. ①"An invention of a product" being explained clearly o If an invention of a product can be identified by a person skilled in the art based on the statements of a claim and can be understood from the statements and implications in the detailed explanation of the invention, then, the invention will be deemed as being explained clearly.	o See 2(5)(i), 2(5)(ii) above for general enablement requirements. o The specification of inventions on genetic engineering shall clearly disclose the methods of producing gene, DNA fragment, antisense nucleotide, vector, recombinant vector, protein, recombinant protein, transformant and hybrid cell and/or the methods of using them. (Examination Guideline for biotechnology, Chapter 2 Section 1.2) o Disclosure requirements for micro-biotechnology inventions (1) Where the detailed description of the invention of inventions on gene, DNA, antisense nucleotide, vector, recombinant vector, transformant, hybrid cell, protein, recombinant protein, monoclonal antibody, microorganism, plants and animals do not disclose particular, practical and reliable utility or such utility cannot be inferred, such inventions are not deemed industrially applicable.	□ Inventions of Product As for the inventions relating to a gene, a vector, a recombinant vector, a transformant, a polypeptide or a protein, a fused cell, a monoclonal antibody per se, the description shall disclose the identification, preparation and use and/or technical effect of the product. (1)Identification of product For an invention of a gene, a vector, a recombinant vector, a transformant, a polypeptide or a protein, a fused cell, a monoclonal antibody, etc., the description shall indicate the structure of the product, such as base sequence of a gene, amino acid sequence of a polypeptide or protein, etc. When the structure of the product cannot be clearly described, the description shall describe the physical/chemical parameters, biological property and/or preparation method of the product, etc. (2)Preparation of product The way of making the product shall be described in the description except where the product can be made by a person skilled in

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	②"Can be made" o For an invention of a gene, a vector, a recombinant vector, a transformant, a fused cell, a recombinant protein or a monoclonal antibody, the way of making the product shall be described in the detailed explanation of the invention except where the product could be made by a person skilled in the art without such description when taking into account the overall descriptions of the specification (excluding claims), drawings and common general knowledge as of the filing. (i) Genes, vectors or recombinant vectors o A process for producing a gene, a vector or a recombinant vector should be described by respective origin or source, means for obtaining a vector to be used, an enzyme to be used, treatment conditions, steps for collecting and purifying it, or means for identification, etc. (ii) Transformants	(2) The detailed description of the invention of inventions on gene, DNA fragment, vector, recombinant vector shall clearly disclose particular requirements(sequence, cDNA, RNA, etc.), specific examples of particular grounds, securement methods of vectors to be used, enzyme to be used, treatment conditions, extraction/processing, identification means, functions, etc. (3) The specification of invention of inventions on transformant shall specifically disclose manufacturing methods of recombinant vector, selection/extraction methods of recombinant vector, identification means, particular product, functions and characteristics of recombinant vector such as particular requirements of transformant, specific examples of particular grounds, genes or recombinant vector to be transferred, nomenclature of host, securement methods of host, gene transfer methods, recombinant vector transfer methods. (4) The detailed description of the invention of inventions on hybrid cells shall specifically	the art without such description when taking into account the overall description of the initial description, claims, drawings and the prior art. For an invention of a gene, a vector, a recombinant vector, a transformant, a polypeptide or a protein, a fused cell, a monoclonal antibody, etc., when it is not possible to describe a process for producing said product in the description in such a manner that a person skilled in the art can reproduce it, the obtained transformant (including a transformant which produces a recombinant polypeptide or protein) or fused cell, etc., into which the gene, the vector, the recombinant vector has been introduced, shall be deposited in accordance with the provisions of Rule 24. For an invention of a process for producing a gene, a vector, a recombinant vector, a transformant, a polypeptide or a protein, a fused cell, a monoclonal antibody, etc., if the process involves the use of a biological material which is not available to the public before the date of filing (or the priority date

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	A process for producing a transformant should be described by a gene or a recombinant vector introduced, a host (a microorganism, a plant or an animal), a method of introducing gene or the recombinant vector into the host, a method of selectively collecting the transformant, or means for identification, etc. (iii) Fused cells o A process for producing a fused cell should be described by stating pretreatment of the parent cells, fusion condition, a method of selectively collecting the fused cell, or means for identification, etc. (iv) Recombinant proteins o A process for producing a recombinant protein should be described by stating means for obtaining a gene encoding the recombinant protein means for obtaining, an expression vector used, means for obtaining a host, a method for introducing the gene into the host, steps for collecting and purifying the	disclose manufacturing methods of hybrid cells such as mother cells to be used, preliminary treatment of mother cells and hybrid cells and selection/extraction methods of hybrid cells, identification means, particular product, functions and characteristics of hybrid cells. (5) The detailed description of the invention of inventions on protein shall specifically disclose protein coding genes, amino acid sequence, origin, extraction/processing, identification means, chemicophysical characteristics(molecular weight, isoelectric point of the condition of optimal activity, stability, etc.), glycosylation, purity, functions and biological characteristics and properties in vitro etc. (6) The detailed description of the invention of inventions on recombinant protein shall specifically disclose manufacturing methods of transforming microorganism including nomenclature of vector host to be used for expression of protein coding genes for recombinant protein, securement methods of	where priority is claimed), the biological material shall be deposited in accordance with the provisions of Rule 24. (3)Use and/or technical effect of a product For an invention of a gene, a vector, a recombinant vector, a transformant, a polypeptide or a protein, a fused cell, a monoclonal antibody, etc., the description shall describe the use and/or technical effect of the product, and specify the technical means, condition, etc., which is needed to obtain said effect. For instance, the applicant shall submit evidence in the description to show that the gene has the special function, in case of a structural gene, the polypeptide or the protein encoded by said gene has the specific function. (Examination Guidelines Part II Chapter 10, Section 9.2.2.1) □ Inventions of Process for Producing Product For an invention of a process for producing a gene, a vector, a recombinant vector, a transformant, a polypeptide or a protein, a

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	recombinant protein from the transformant into which the gene has been introduced, or means for identification of the obtained recombinant protein, etc. (v) Monoclonal antibodies o A process for producing a monoclonal antibody should be described by stating means for obtaining or producing immunogen, a method for immunization, a process for selectively obtaining antibody producing cells, or means for identification of the monoclonal antibody, etc. (vi) Deposit of microorganisms, etc. (a) For an invention of a gene, a vector, a recombinant vector, a transformant, a fused cell, a recombinant protein, a monoclonal antibody, etc. produced by the use of a microorganism, etc. ("a microorganism, etc." here includes a microorganism, a plant and an animal), a process for producing the said product should be described in the specification as filed so that a person skilled	host, and transfer methods of the above-mentioned gene into the host etc. The specification of the invention also shall disclose extraction/processing of recombinant protein from transforming microorganism transferred with the concerned gene, identification means and functions and characteristics of recombinant protein. (7) The detailed description of the invention of inventions on monoclonal antibody shall specifically disclose manufacturing methods such as securement and manufacturing methods of immunogen and immunization method and selection/extraction methods of antibody producing cell, identification means of antibody producing cell((cross-)reactivity with antigen, non-reactivity), identification of epitope, level of activity, functions, and characteristics. However, where inventions on patentable antigen disclose the antigen clearly enough to work the concerned antigen so that a person skilled in the art can easily produce and use the monoclonal antibody on the antigen, such	fused cell, a monoclonal antibody, etc., the description shall describe said process in a manner sufficiently clear and complete so as to enable a person skilled in the art to prepare the product by using said process, and at least one use of said product shall be described in the description when said product is novel. (Examination Guidelines Part II Chapter 10, Section 9.2.2.2)

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	in the art can make it. Further, the microorganism used in the process should be deposited and its accession number should be described in the specification as filed unless the microorganisms readily available to a person skilled in the art. (b) For an invention of a gene, a vector, a recombinant vector, a transformant, a fused cell, a recombinant protein, a monoclonal antibody, etc., when it is not possible to describe a process for producing the said product in the specification in such a manner that a person skilled in the art can make it, the obtained transformant (including a transformant which produces a recombinant protein) or the fused cell (including a hybridoma which produces a monoclonal antibody) into which the gene, the vector, the recombinant vector has been introduced, should be deposited and its accession number should be described in the specification as filed. (c) Generally, the acquisition of a hybridoma producing a monoclonal antibody which	inventions do not necessarily have to disclose specific examples. (8) The detailed description of the invention specification of invention of inventions on antisense nucleotide shall specifically disclose particular requirements(nucleic acid sequence, inhibitory activity on the specific protein production) and specific examples of particular grounds (manufacturing methods, identification means). (9) Where the detailed description of the invention discloses nucleic acid sequence consisting of more than 10 nucleotides or amino acid sequence consisting of protein or peptide of more than 4 L-amino acids, such sequences shall be written according to "Instruction on preparation and submission of patent applications, etc. containing nucleic acid sequence or amino acid sequence" and be attached to the end of the detailed description of the invention. (Examination Guideline for biotechnology, Chapter 2 Section 1.2 and 1.3)	

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	satisfies limitative conditions, (e.g., a monoclonal antibody whose affinity to the antigen A is specified by the limitative coupling constant,) is not reproducible. Therefore, in case that the claimed invention is related to a monoclonal antibody which satisfies limitative conditions or a hybridoma producing the said monoclonal antibody, the said hybridoma should be deposited and its accession number should be described in the specification as filed, except where the hybridoma can be created by a person skilled in the art on the basis of the description in the specification. ③"Can be used" An invention of a gene, a vector, a recombinant vector, a transformant, a fused cell, a recombinant protein, a monoclonal antibody, etc., must be described so that invention can be used by the person skilled in the art. Knowledge of how the invention can be used shall be described in the detailed explanation of the invention, except where it		

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	could be understood by the person skilled in the art without such description, when taking into account the overall descriptions of the specification (excluding claims), drawings and common general knowledge as of the filing. (2) Invention of a Process For an invention of a process, the definition of "being able to carry out the invention" is that the process can be used. Further, the said invention of a process should be explained clearly in the detailed explanation of the invention. (3) Invention of a Process for Manufacturing a Product Where an invention of a process is directed to "a process for manufacturing a product," the definition of "the process can be used" means that the product can be manufactured by the process. Further, the said invention of a process for manufacturing a product should be explained clearly. (Examination Guidelines Part VII Chapter 2.		

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	Section 1.1.2.1)		
(b) Support requirement	o Refer to 3.(4) above. o Example 6: While "A DNA encoding a protein having an activity A", that is, an invention relating to DNA defined only by a function, is claimed, only DNA composed of one specified nucleotide sequence is disclosed in the detailed explanation of the invention as the specific example; the content disclosed in the detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention even in light of the common general knowledge as of the filing. (Refer to Case 3.) (Examination Guidelines Part I Chapter 1.	o See above 6(3)(i)(a)	□ For an invention of a gene, a vector, a recombinant vector, a transformant, a polypeptide or a protein, a fused cell, a monoclonal antibody, etc., the claim of the invention may be described as indicated below. 1. Gene (1) A gene may be defined directly by specifying its base sequence. (2) A structural gene may be defined by specifying an amino acid sequence of the polypeptide or protein encoded by said gene. (3) Where the base sequence of the gene or the amino acid sequence of the polypeptide or protein encoded by said gene is set forth in

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	Section 2.2.1.3 (3) (d))		the “Sequence Listing" or drawing of the description, reference may be made to the sequence by use of the sequence identifier in the “Sequence Listing" or the number of the drawing. (4) Where a gene has a special function, for example, the protein encoded by it has the activity of enzyme A, the gene may be defined by a combination of the terms “substitution, deletion or addition" and functions of the gene. [Example] A gene encoding a protein of (a)or (b)as follows: (a)a protein whose amino acid sequence is represented by Met-Tyr-…-Cys-Leu, (b)a protein derived from the protein of (a)by substitution, deletion or addition of one or several amino acids in the amino acid sequence defined in (a)and having the activity of enzyme A. The above-mentioned expression of the gene is permissible only if: I. the said derived protein of (b) is exemplified

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			in the description, for instance in the examples; and II. the description states the technical means used for producing the derived protein of (b)and verifying its function (otherwise, the description does not sufficiently disclose the gene). (5) Where a gene has a special function, for example, the protein encoded by it has the activity of enzyme A, the gene may be defined by a combination of the terms “hybridize under stringent conditions" and functions of the gene. [Example] A gene selected from the group consisting of: (a) a DNA molecule whose nucleotide sequence is represented by ATGTATCGG…TGCCT, (b) a DNA molecule which hybridizes under stringent conditions to the DNA sequence defined in (a)and encodes the protein having the activity of enzyme A. The above-mentioned expression of the gene is permissible only if:

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			I. “stringent conditions" are described in detail in the description; and II. the said DNA molecule defined in (b) is exemplified in the description, for instance in the examples. (6) When the above mentioned expressions of (1)-(5) cannot be used, a gene may be described by specifying functions, physiochemical properties, origin or source of said gene, a process for producing said gene, etc. 2. Vector (1) A vector may be defined by specifying a base sequence of its DNA. (2) A vector may be described by specifying a cleavage map of DNA, molecular weight, number of base pairs, source of the vector, process for producing the vector, function or characteristics of the vector, etc. 3. Recombinant Vector A recombinant vector may be described by specifying at least one of the gene and the vector. 4. Transformant

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			A transformant may be described by specifying its host and the gene (or the recombinant vector) which is introduced. 5. Polypeptide or Protein (1) A polypeptide or protein may be defined by specifying an amino acid sequence or a base sequence of structural gene encoding said amino acid sequence. (2) Where the amino acid sequence of the polypeptide or protein is set forth in the "Sequence Listing" or drawing of the description, reference may be made to the sequence by use of the sequence identifier in the "Sequence Listing" or the number of the drawing. (3) Where a protein has a special function, for example, it has the activity of enzyme A, the protein may be defined by a combination of the terms "substitution, deletion or addition" and functions of the protein. [Example] A protein of (a)or (b) as follows: (a)a protein whose amino acid sequence is represented by Met-Tyr-…-Cys-Leu,

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			(b)a protein derived from the protein of (a) by substitution, deletion or addition of one or several amino acids in the amino acid sequence in (a) and having the activity of enzyme A. The above-mentioned expression of the protein is permissible only if: I. the said derived protein of (b) is exemplified in the description, for instance in the examples; and II. the description states the technical means used for producing the derived protein of (b) and verifying its function (otherwise, the description does not sufficiently disclose the protein). (4) When the above-mentioned expressions of (1)-(3) cannot be used, a polypeptide or protein may be described by specifying functions, physiochemical properties, origin or source of said polypeptide or protein, a process for producing said polypeptide or protein, etc. 6. Fused Cell A fused cell may be described by specifying

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			parent cells, function and characteristics of the fused cell, or a process for producing the fused cell, etc. 7. Monoclonal Antibody A claim directed to a monoclonal antibody may be defined by specifying hybridoma which produces it. (Examination Guidelines Part II Chapter 10, Section 9.3.1)
(c) Others			No patent right shall be granted for any invention-creation where acquisition or use of the genetic resources, on which the development of the invention-creation relies, is not consistent with the provisions of the laws and administrative regulations. (Patent law: Article 5.2) The genetic resources referred to in the Patent Law mean the material obtained from such as human body, animal, plant, or microorganism which contains functional units of heredity and is of actual or potential value. The invention-creation is developed relying on the genetic resources referred to in

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			the Patent Law means that the invention-creation is developed relying on the use of the heredity function of the genetic resources. (Implementing Regulations : Rule 26. 1) Where an application for patent is filed for an invention-creation the development of which relies on the use of genetic resources, the applicant shall state that fact in the request, and fill in the forms provided by the patent administration department under the State Council. (Implementing Regulations :Rule 26.2) From Guideline: In the above-mentioned provisions, heredity function refers to the ability of organism to pass on traits or characteristics from an ancestor to a descendent through reproduction, or allow the entire organism to be reproduced. Functional unit of heredity refers to a gene, or a DNA or RNA fragment having heredity

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			function of an organism. "Material obtained from such as human body, animal, plant or microorganism which contains functional units of heredity" refers to carrier of functional units of heredity, which includes not only a whole organism, but also a part of it, such as organ, tissue, blood, body fluid, cell, genome, gene, DNA or RNA fragment, etc. With regard to an invention-creation, using the heredity function of the genetic resources refers to, for example, isolating, analyzing and/or processing the functional units of heredity to develop the invention-creation and to realize the value of the genetic resources. "Acquisition or use of the genetic resources is not consistent with the provisions of the laws and administrative regulations" means that the acquisition or use of the genetic resources is not beforehand approved by relevant administrative departments or licensed by relevant right holder in accordance with the provisions of relevant laws and administrative regulations of China. For

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			example, in accordance with the provisions of "Animal Husbandry Law of the People's Republic of China" and "Measures for Examination and Approval in respect of the Entry and Exit of Genetic Resources of Livestock and Poultry and in respect of Research in Their Utilization in Cooperation with Foreign Entities", in the case of exporting abroad the genetic resources that have been included in the directory for protection of the genetic resources of livestock and poultry in China, relevant formalities for examination and approval shall be gone through. Where certain genetic resources that have been included in the directory for protection of livestock and poultry are exported abroad from China, but no formality for examination and approval has been gone through, no patent right shall be granted for any invention-creation developed relying on such genetic resources. (Guidelines Part II Chapter 1, Section 3.2) Direct source of the genetic resources referred

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			to in the Patent Law means the direct channel to obtain the genetic resources. When indicating the direct source of the genetic resources, the applicant shall provide such information as the time, place, means and provider, etc., on acquisition of the genetic resources. Original source of the genetic resources referred to in the Patent Law means the place in the in-situ conditions where the organism to which the genetic resources belong is collected. Where the organism naturally occurs, the in-situ conditions refer to the natural habitats where this organism grows. Where the organism is a cultivated or domesticated species, the in-situ conditions refer to the surroundings where this organism has developed its distinctive traits or characteristics. When indicating the original source of the genetic resources, the applicant shall provide such information as the time, place and collector, etc., on the collection of the organism to which the genetic resources belong. (Guidelines Part II Chapter 10,

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			Section 9.5.1) Where an application for patent is filed for an invention-creation the development of which relies on the use of genetic resources, the applicant shall state that fact in the request, and fill in the specific information of the direct and original source of the genetic resources in the Registration Form for Indicating Source of Genetic Resources (hereafter referred to as registration form) prepared by the Patent Office. The applicant's indication of the direct and original source shall be in conformity with the requirements for filling in the registration form, and gives relevant information clearly and completely. Where the genetic resources are directly obtained from a certain institution, such as depository institution, seed bank (germ plasm bank), gene library etc., if the institution knows and can provide the original source, the applicant shall provide the information of the original source of the genetic resources.

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			Where the applicant fails to indicate the original source, he shall state the reasons thereof, and provide relevant evidence if necessary, for example, state “the seed bank does not make a record of the original source of the genetic resources", or “the seed bank can not provide the original source of the genetic resources", and provide relevant written certificate issued by the seed bank. (Guidelines Part II Chapter 10, Section 9. 5. 2) When examining according to Article 26.5 and Rule 26.2, the examiner shall, at first, read the description and claims carefully to understand the invention-creation accurately. On this basis, the examiner shall determine whether the development of the invention-creation relies on the genetic resources, as well as on which genetic resources the invention-creation relies. For invention-creation developed relying on the genetic resources, the examiner shall examine whether the applicant has submitted

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			the registration form. If the applicant fails to submit any registration form, the examiner shall notify him in the Office Action to make a supplementary submission, and also specify which genetic resources shall be indicated regarding its source and explain the reasons thereof. If the registration forms submitted by the applicant only indicate sources of part of the genetic resources, the examiner shall notify him in the Office Action to additionally submit the registration form(s) for the other genetic resources, and also specify the genetic resources the source of which shall be additionally indicated and explain the reasons thereof. If the applicant has submitted the registration form, the examiner shall examine whether the direct and original source of the genetic resources are indicated in the registration form. Where no original source is indicated, the examiner shall examine whether the reason thereof is stated. If the registration form completed by the applicant

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			is not in conformity with the relevant provisions, the examiner shall point out the defects existing in the registration form in the Office Action. Where the patent application is still not in conformity with the provision of Article 26.5 after the applicant has made observations or amendments, the examiner shall reject it. It should be noted that the contents in the registration form do not belong to the disclosure contained in the initial description and claims. Therefore, it can neither be used as the basis to judge whether the description has sufficiently disclosed the claimed invention, nor as the basis to amend the description and claims. (Guidelines Part II Chapter 10, Section 9.5.3)

COMPARATIVE STUDY OF PATENT PRACTICES ON REQUIREMENTS FOR DISCLOSURE AND CLAIMS

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(ii) Deposit of microorganism	Deposit and Furnishing of Microorganisms o When describing inventions involving a microorganism itself or a use for a novel microorganism, and when it is impossible to describe how to originate the microorganism so that the person skilled in the art can produce the microorganism, the microorganism must be deposited according to Section 27bis of Regulations under the Patent Act. Section 27bisof Regulations under the Patent Act (Deposition of microorganisms) 1A person desiring to file a patent application for an invention involving or using a microorganism shall attach to the request a copy of the latest receipt referred to in Rule 7 of the Regulations under the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the purpose of Patent Procedure (hereinafter referred to as "Treaty") for the deposit of the microorganism issued by the International Depositary	o An applicant shall describe the claimed invention in a detailed description of an invention in a manner that a person with ordinary knowledge in the technology to which the invention pertains may easily work the invention. When a starting material or end product includes biological materials such as micro-organisms, there are many cases where an invention cannot be easily worked only based on the content of the specification. In such cases, in order for a person with ordinary knowledge in the technology to which the invention pertains to easily work the invention based on the content of the specification, a means of securing the starting material and a manufacturing process of the end product shall be disclosed in detail in the specification. In other words, the workability of the invention can be supported by depositing micro-organisms which are starting materials or end products. o Subject of Deposit (1) Micro-organisms subject to deposit refer to	□ Where an invention for which a patent is applied for concerns a new biological material which is not available to the public and which cannot be described in the application in such a manner as to enable the invention to be carried out by a person skilled in the art, the applicant shall, in addition to the other requirements provided for in the Patent Law and these Implementing Regulations, go through the following formalities: (1) depositing a sample of the biological material with a depositary institution designated by the patent administration department under the State Council before, or at the latest, on the date of filing (or the priority date where priority is claimed),and submit at the time of filing or at the latest, within four months from the date of filing, a receipt of deposit and the viability proof from the depository institution; where they are not submitted within the specified time limit, the sample of the biological material shall be deemed not to have been deposited;

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	Authority defined in Article 2(viii) of the Treaty, or a document certifying the fact that the microorganism has been deposited with an institution designated by the Commissioner of the Patent Office, except where the microorganism is readily available to a person skilled in the art to which the invention pertains. 2Where an accession number is newly given after the filing of a patent application to the deposit of a microorganism under the preceding paragraph, the applicant for a patent or the patentee shall notify the Commissioner of the Patent Office without delay. 3The notification under the preceding paragraph shall be made in accordance with Form 32 with respect to a patent application, or Form 33 with respect to an International Patent Application. (Examination Guidelines Part VII Chapter 2. Section 5.1)	all the biological materials such as genes, vectors, germs, mold, animal cells, fertilized eggs, seeds, etc. and the type of micro-organisms eligible for deposit differs according to each depository. (2) Even for plant-related inventions, if necessary, parent plants or seed or cells that can produce the concerned plants can be deposited so that a person with ordinary knowledge in the technology to which the invention pertains can easily work the invention. (Examination Guidelines Part II Chapter 6. Section 2) o Article 2 of the Enforcement Decree of the Patent Act (Deposit of Microorganisms) ① Any person who desires to make a patent application for an invention related to a micro-organism, shall deposit such micro-organism with a depository determined by the Commissioner of the Korean Intellectual Property Office or an organization which has acquired a status as an international	(2) giving in the application document relevant information of the characteristics of the biological material; (3) indicating, where the application relates to the deposit of a sample of the biological material, in the request and the description the scientific name (with its Latin name) and the title and address of the depositary institution, the date on which the sample of the biological material was deposited and the accession number of the deposit; where, at the time of filing, they are not indicated, they shall be supplied within four months from the date of filing; where after the expiration of the time limit they are not supplied, the sample of the biological material shall be deemed not to have been deposited. (Rule 24.) □ "Biological material which is not available to the public" mentioned in Rule 24 includes the biological material held by an individual or entity, deposited with a depositary institution not for the purpose of patent procedures and not released to the public; or although the process for producing

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		depository under Article 7 of the Budapest Treaty on the International Recognition of the Deposit of Micro-Organisms for the Purpose of Patent Procedure (hereinafter referred to as "international depository") and append documents certifying the fact (in cases of deposit with the international depository, a copy of the latest deposit certificate of those issued under Article 7 of the Budapest Treaty on the International Recognition of the Deposit of Micro-Organisms for the Purposes of Patent Procedure) to the patent application: provided, That if a person who has ordinary knowledge in the field of technology to which the invention belongs, can easily obtain such micro-organism, it need not to be required to deposit such micro-organism. ② If a new deposit number is issued to the micro-organism deposited under paragraph (1) after a patent application is filed, a patent application or a patentee shall report it, without delay, to the Commissioner of the	the biological material is described in the description, a person skilled in the art still cannot repeat the process so as to obtain said biological material, e.g., new microorganisms created by means of screening, mutation, etc., which cannot be repeated. All these biological materials shall be deposited according to relevant provisions. The following are the circumstances in which a biological material shall be regarded as available to the public and the deposit thereof is not required: (i) as for the biological material commercially available to the public at home and abroad, the commercial supplier of it shall be indicated in the description, and if necessary, the evidence shall be submitted to show that the biological material is commercially available to the public before the date of filing (or the priority date where priority is claimed); (ii) biological materials which have been deposited with a depositary institution recognized by the patent offices of various

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		Korean Intellectual Property Office. o Article 3 of Enforcement Decree of the Patent Act(Matters to be Entered in Patent Specifications of Invention related to Micro-Organism) Any person who intends to file a patent application for an invention related to a micro-organism shall enter in the specifications prescribed in Article (2) of the Act, the deposit number issued by the depository or the international depository when he/she has deposited the microorganism pursuant to the main sentence of Article 2(1), and the method of acquisition of the micro-organism when he/she did not deposit it pursuant to the proviso to Article 2(1).	countries or by international patent organizations for the purposes of patent procedures, and have been published in the patent Gazette or have been granted the patent right before the date of filing (or the priority date where priority is claimed) of the application filed in China; and (iii) the biological material that must be used in an application has been disclosed in a non-patent document before the date of filing (or the priority date where priority is claimed), with the source of the document indicated in the description, the public access to the biological material described, and the proof of guaranteeing the biological material accessible to the public for twenty years from the filing date provided by the applicant of the application. (Examination Guidelines Part II Chapter 10, Section 9.2.1)

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7. Others			
(1) Examiners' office action	(1) Where the examiner makes a notice of reasons for refusal due to violation of requirement(s) under Article 36(4)(i), 36(6)(i), or 36(6)(ii), he/she shall explain the reason why he/she determines that the claimed invention fails to meet the requirement(s), while showing the grounds for such determination. The examiner is also required to set forth in the notice, to the extent possible, a clue for the applicant to understand the direction of an amendment that should be made in order to avoid the reasons for refusal. It is not appropriate for the examiner to merely state, such as "The claimed invention	o Article 62 of Patent Act stipulates that the examiner, before the decision to reject an application, should notify an applicant of the grounds for rejection and give him/her an opportunity to submit a written argument with specifying a designated period. This provision is designed to prevent errors or mistakes by an examiner since he or she shall not be always expected to have the advanced knowledge requisite to a judgment to patentability in a claimed invention. And also it would be too harsh to reject a patent outright without giving an error correction opportunity under the First-to-File rule. The grounds for rejection are as follows.	□ If the examiner can reasonably doubt that the invention does not meet the requirement of sufficient disclosure, he shall invite the applicant to make a clarification. The following are examples of the circumstances in which the technical solution described in the description is regarded as unable to be carried out due to lack of technical means to solve the technical problem: (1) the description sets forth only a task and/or an assumption, or simply expresses a wish and/or a result, providing no technical means that a person skilled in the art can implement;

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	is unclear," without specifying the reasons for such determination, because this would make it difficult for the applicant to make an effective argument or understand the direction of an amendment that should be made in order to avoid the reasons for refusal. In case of the violation of the requirement under Article 36(4)(i), It is recommended that the reason above should be supported by reference document. Such documents are, in principle, limited to those that are known to a person skilled in the art as of the filing. However, descriptions of later applications, certificates of experimental result, written oppositions to the grant of a patent, and written opinions submitted by the applicant for another application etc. can be referred to for the purpose of pointing out that the violation stems from the statements of the description or drawings being inconsistent with a fact generally accepted as scientifically or technically correct by a person skilled in the art. (2) The reasons for refusal shall be deemed	① Where a claimed invention is not patentable pursuant to Article 25 · 29 · 32 · 36 (1), (3) or 44 ② Where no persons are entitled to obtain a patent according to the Article 33 (1), or where an a claimed invention is not patentable pursuant to the proviso of the same Article. ③ Where it violates the clause(s) of the Treaty ④ Where requirements in the Article 42 (3), (4), (8) or Article 45 are not satisfied. ⑤ Where an amendment is out of the scope prescribed in the Article 47(2) ⑥ Where a divisional application is filed out of the scope prescribed in the Article 52 (1) ⑦ Where a converted application is filed out of the scope prescribed in the Article 53 (1) (2) The period designated for submission of the ground for rejection shall be within two months regardless of whether an applicant is non-resident or not. However, the designated period hereof may add an additional period required for tests or results evaluations, when	(2) the description sets forth a technical means, but the means is so ambiguous and vague that a person skilled in the art cannot concretely implement it according to the contents of the description; (3)the description sets forth a technical means, but a person skilled in the art cannot solve the technical problem of the invention by adopting said means; (4) the subject matter of an application is a technical solution consisting of several technical means, but one of the means cannot be implemented by a person skilled in the art according to the contents of the description; and (5)the description sets forth a concrete technical solution but without experimental evidence, while the solution can only be established upon confirmation by experimental result. For example, in general, the invention of a new use for a known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of

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	overcome if the examiner finds the applicant's argument or clarification to be acceptable. Where the applicant's argument or clarification does not change the examiner's conviction at all regarding the violation of Article 36(4)(i), 36(6)(i), 36(6)(ii), or where it succeeds in denying the examiner's conviction only to the extent that truth or falsity becomes unclear, the examiner makes a decision of refusal on the ground earlier notified by the notice of reasons for refusal. (Examination Guidelines Part I Chapter 1. Section 2.2.1.4, 2.2.2.5, 3.2.3)	a written statement of argument requires tests and their evaluation and their time consumption is acknowledged. (Note) The period designated by the Commissioner of KIPO (for an amendment request in accordance with the Article 46 of the Patent Act) is within one month. (Examination Guidelines Part V Chapter 3. Section 5)	enablement cannot be met. (Examination Guidelines Part II Chapter 2, Section 2.1.3)
(2) Applicants' responses	o Upon receiving a notice of reasons for refusal due to violation of Article 36(4)(i), 36(6)(i), or 36(6)(ii), the applicant may make an argument or clarification by submitting a written opinion, certificate of experimental results, and the like. o However, regarding violation of Article 36(6)(i), if, due to a deficiency of the matters stated in the detailed explanation of the invention, the content disclosed in the	o An applicant may submit arguments in response to an examiner's notice of grounds for a rejection and may file amendments to the specification (including detailed description and claims) or drawing(s) within the period designated in Article 47. (Examination Guidelines Part V Chapter 1. Section 1.2) o The scope of an amendment to the	□ The response of the applicant may include the observations only, the revised application documents (replacement sheet and/or rectification) may be also included. Where the applicant states in his response the objection to the observations in the Office Action or makes amendments to his application, he shall state his opinions in detail in the observations, or explain whether the amendments are in compliance with the

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	detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention even in light of the common general knowledge as of the filing, the reasons for refusal cannot be overcome even when the applicant submits a certificate of experimental results after the filing to make up for such deficiency, thereby arguing that the disclosed content can be expanded or generalized to the scope of the claimed invention. o In addition, regarding violation of Article 36(4)(i), if, due to a deficiency of the matters stated in the detailed explanation of the invention, the statement of the detailed explanation of the invention cannot be deemed to be clear and sufficient as to enable a person skilled in the art to work the claimed invention even in light of the common general knowledge as of the filing, the reasons for refusal cannot also be overcome even when the applicant submits a certificate of experimental results after the filing to make up for such deficiency, thereby arguing that	specification or drawing(s) differs depending on the amendment periods. The addition of new matter shall be prohibited when an amendment is carried out within the self-amendment period before the start of an examination or within the period designated for submitting arguments on a non-final notice of grounds for rejection (according to 47①(i) of the Patent Act). However, where an amendment is made within the period designated for submitting arguments on a final notice of grounds for rejection (according to 47①(ii) of the Patent Act) and where an amendment is made upon a request for reexamination, the scope of the amendment shall be further restricted by only allowing the reduction of scope of claims, etc. as well as the prohibition of the addition of new matter to the application. (Examination Guidelines Part IV Chapter 1. Section 3.2)	corresponding provisions and how the defects existing in the initial application documents have been overcome. (Examination Guidelines Part II Chapter 8, Section 5.1) □ Whether or not the description is sufficiently disclosed is judged on the basis of the disclosure contained in the initial description and claims, any embodiment and experimental data submitted after the date of filing shall not be taken into consideration. (Examination Guidelines Part II Chapter 10, Section 4.1) □ In accordance with Rule 51.3, the amendment should be made in answer to the defects as indicated in the Office Action. If the manner of the amendment is not in conformity with Rule 51.3, the text amended is generally not acceptable. However, where the manner for making amendment dose not meet the requirement of Rule 51.3, but the contents and scope of the amendment are in conformity with the provision of Article 33, the amendment may be deemed to be made in answer to the defects as indicated in the

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	the statement is clear and sufficient. (Examination Guidelines Part I Chapter 1. Section 2.2.1.5, 2.2.2.6, 3.2.4)		Office Action and the application documents amended in this way may be acceptable, provided that the defects existed in the initial application documents are eliminated in the amended documents and there is prospect for the application to be granted the patent right.
(3) Oaths / declarations to overcome rejections	o The Japanese Patent Act does not provide a legal basis on oaths or declarations.	o There is no provision for oaths or declarations.in Korean Patent Act	□ There is no specific provision for oaths or declarations In SIPO.

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(4) New matter / amendments	o An amendment which introduces matters extending beyond the "matters described in the original description, etc." (i.e., an amendment containing new matter) is not acceptable. The "matters described in the original description, etc." are disclosed to third parties by the applicant as a prerequisite for gaining a monopoly based on a patent right for an invention, the highly advanced creation of technical ideas, and therefore such "matters" must be technical matters concerning the invention disclosed in the description, etc.. And the "matters described in the original description, etc." mean technical matters that a person skilled in the art can understand, taking into account all statements in the original description, etc.. Where an amendment does not introduce any new technical matter to the technical matters that can be understood in this manner, the amendment can be deemed to be made within the scope of the "matters described in the description, etc." (Reference: Intellectual Property High Court	o 'New matter' refers to an element which is out of the scope of the specification or drawing(s) attached to the patent application. In this context, matters in the specification or drawing(s) attached to the application (hereinafter referred to as 'the original specification') mean the elements which are explicitly described in the specification or drawing(s), or which without any explicit description, a person skilled in the art would understand that are the same as the matters described in the specification or drawing(s) based on technical information at the time of filing the application. o In other words, even if elements described in the specification or drawing(s) are not expressly described, but if a person skilled in the art clearly understands through his/her assessment on the elements in the original application, claims or drawing(s) that the matters are written, such elements shall not be new matter.	□ An applicant may amend his or its application for a patent, but the amendment to the application for a patent for invention may not go beyond the scope of disclosure contained in the initial description and claims, and the amendment to the application for a patent for design may not go beyond the scope of the disclosure as shown in the initial drawings or photographs. (Article 33) □ Only in the following two cases, the applicant may amend the application document for an invention patent on his own initiative. (1)At the time when a request for examination as to substance is made; and (2) When within the time limit of three months after the receipt of the notification of the Patent Office on the entry into examination as to substance of the application. □ When replying the Office Action from the Patent Office, the amendment on his own initiative is not allowable. (Examination Guidelines Part II Chapter 8, Section 5.2.1.2)

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	Grand Panel Decision dated on May 30, 2006 (Heisei 18 (Gyo-Ke), No.10563, "Solder resist")) (Examination Guidelines Part III Section I 3.) o The amendments to add not only "matters expressly presented in the original description, etc." but also "matters inherently presented in the original description, etc." are acceptable because they do not introduce any new technical matter. (a) In order to conclude that an amendment is done within the scope of "matters inherently presented in the original description, etc.," the meaning of the particulars of the amendment shall be evident to a person skilled in the art in light of common general technical knowledge as of the filing date, as if it were written in the original description, etc. , even though it is not expressly presented there. (b) Well-known art or commonly used art itself does not mean "matters inherently presented in the original description, etc.." (c) In some cases, a matter is inherently	o The subject of assessment in addition of new matter shall be the amended specification, claims or drawing(s). The addition of new matter to any of the specification, claims or drawing(s) shall not be accepted. o The specification, claims or drawing(s) originally attached to the patent application shall be the subject of comparison of whether new matter is added to the amended specification, claims or drawing(s). In this context, the phrase 'originally attached to the patent application' refers to the submission of the specification, claims or drawing(s) along with the patent application by the filing date of the application. The matter added to the specification, claims or drawing(s) through an amendment after the filing date of the application shall not be the elements described in the specification, claims or drawing(s) originally attached to the application. o Whether new matter is added to the	□ In accordance with Rule 51 .3，when replying the Office Action, the amendment, if there is, shall be made in answer to the defects as indicated in the Office Action. If the manner of the amendment is not in conformity with Rule 51 .3，the text as so amended shall generally be unacceptable. (Examination Guidelines Part II Chapter 8, Section 5.2.1.3) □ Specifically, if, after the addition, change and/or deletion of part of the contents of the application, the information as seen by a person skilled in the art is different from those described in the initial application and such information cannot be directly or unambiguously derived from those described in the initial application, such amendment shall not he allowable. Here, the contents the initial description of the application refer to contents described in and the drawings) and claims, not including the contents of any priority documents. (Examination Guidelines Part II Chapter 8, Section 5.2.3)

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	presented to a person skilled in the art in light of several parts in the original description, etc. (e.g., problems to be solved and embodiments of an invention, a description and drawings). (Examination Guidelines Part III Section I 3.1) o Article 17bis(4) is a provision to prohibit making an amendment whereby inventions, of which patentability has been determined in a notice of reasons for refusal, in the claims before the amendment, and inventions amended after the notice of reasons for refusal is given do not meet the requirements of unity of invention because they do not have any same or corresponding special technical features (hereinafter referred to as the "amendment that changes special technical features of the inventions"). This provision makes the requirements of unity of invention extend to claimed inventions after amendment. (Examination Guidelines Part III Section II 3.)	amended specification, claims or drawing(s) shall be determined by whether elements described in the amended specification, claims or drawing(s) (the subject of assessment) are in the scope of the elements described in the specification or drawing(s) (the subject of comparison). o In this context, the phrase of being in the scope of the elements described in the specification or drawing(s) does not mean being completely and externally the same within the scope of matters described in the specification, claims or drawing(s) originally attached to the patent application. Also, matters that a person skilled in the art clearly understands based on matters described in the specification, claims or drawing(s) originally attached to the patent application shall be deemed as being in the scope of matters described in the specification or drawing(s) . (Examination Guidelines Part IV Chapter 2. Section 1.1)	□ If no other numerical value within the initial numerical range of a certain technical feature is described in the initial description and claims, while novelty and inventive step are prejudiced by the contents disclosed in reference documents, or the invention cannot be carried out when said feature adopts certain parts of the initial numerical range, in view of these two situations, the applicant has to use a specific "disclaimer" to exclude said parts from the initial numerical range so that the numerical range of the claimed technical solution does not include said parts obviously as a whole, such amendment shall not be allowed because the amendment has gone beyond the scope of disclosure contained in the initial description and claims, with the exception that the applicant can prove, in accordance with the contents described in the initial application, that the invention cannot be carried out when said feature adopts the "disclaimed" numerical value, or the invention possesses novelty and involves an inventive step when said feature adopts the numerical

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			value after the "disclaimer". (Examination Guidelines Part II Chapter 8, Section 5.2.3.3)
	o The amendment of the scope of claims after the final notice of reasons for refusal shall be limited to those for the following purposes; (i) the deletion of a claim or claims as provided in Article 36(5); (ii) restriction of the scope of claims (limited to the cases where the restriction is to restrict matters required to identify the invention stated in a claim or claims under Article 36(5), and the industrial applicability and the problem to be solved of the invention stated in the said claim or claims prior to the amendment are identical with those after the amendment); (iii) the correction of errors; and (iv) the clarification of an ambiguous statement (limited to the matters stated in the reasons for refusal in the notice of reasons for refusal). (Article 17-2 (5) of the Patent Act)	(3) Though the added matters through amendment are well-known prior arts, if a person skilled in the art does not clearly understand that the added matters are the same as the matters described in the specification or drawing(s) , the amendment of adding such well-known prior arts shall be deemed as addition of new matter out of the scope of the matters described in the specification or drawing(s) . (Examination Guidelines Part IV Chapter 2. Section 1.2)	

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(5) Specification amendments vs. file wrapper documents	o When written opinion or amendment is submitted in response to the first notice of reasons for refusal, the examiner should examine as follows: (1) Examination of the content of a written opinion, amendment etc. The examiner should examine the content of a written opinion, amendment, etc. and judge whether the previous reasons for refusal was resolved or not. In particular, where only a written opinion was submitted without amendment in response to the notice of refusal, the examiner should consider sufficiently the content of the written opinion and examine whether the reasons for refusal indicated in the notice of reasons for refusal can be resolved or not. (2) Handling of amendment Where an amendment was submitted in response to the first notice of reasons for refusal, the examiner should accept and examine it based on the description, claims,		□ If, through search, the examiner finds any reference documents which are even more related to the claimed subject matter of the invention than the prior art cited in the initial description by the applicant, the applicant shall be allowed to amend such part of the description by adding the contents of these documents and citing the document. At the same time, the contents describing the unrelated prior art shall be deleted. It shall be noted that such amendment, in fact, has introduced the contents which are not contained in the initial claims and description. However, since the amendment relates just to the background art other than the invention per se, and the contents added are prior art already known to the public before the date of filing, it is allowable. □ Amendment by the part of "Contents of Invention" which relater to the advantageous effects of the invention is allowable only when the technical feature(s) is clearly described in the initial application documents, but its advantageous effect is not mentioned clearly,

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	drawings etc. as amended. (3) Handling of written opinions, reports of experiment results, etc. Written opinions and reports of experiment results submitted in response to the notice of reasons for refusal can not substitute for the detailed explanation of the invention in the description, but if the applicant argue and prove thereby that the matters disclosed in the description or drawings as originally filed are correct and proper, the examiner should take into consideration of these particulars. (Examination Guidelines Part IX Section II 4.3.2) o Based on the provision in Patent Act Article 194 (1), the examiner can request the applicant for submission of documents and other articles (hereinafter referred to documents etc.) required for the examination. (Examination Guidelines Part IX Section II 5.)		and it can be deduced directly and unambiguously by a person skilled in the art from the initial documents. □ The useful effects which cannot be directly derived from the initial application by a person skilled in the art are not allowed to add. . (Examination Guidelines Part II Chapter 8, Section 5.2.3.1) □ Amendment by the best mode for carrying out the invention or embodiment is generally limited to the addition of the source of the specific contents of the initial mode or embodiment and the standard measuring method of the described data reflecting the advantageous effects of the invention (including the standard equipment and/or appliance to be used). (Examination Guidelines Part II Chapter 8, Section 5.2.2.2) □ It is not allowed that the experimental data is added to illustrate the advantageous effects of the invention, and/or the specific mode for carrying out the invention or embodiment is added to prove that the invention can be carried out in the extent of

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			protection claimed in the claims. (Examination Guidelines Part II Chapter 8, Section 5.2.3.1) □ The documents in the patent application file are mainly from the following sources: (1)the patent application documents and other documents submitted by the applicant when filing the application; (2) the various documents submitted by the applicant according to the requirement of the examiner in the course of examination of the patent application; (3) the documents and certifying materials submitted by the applicant in going through formalities on his own initiative after filing the patent application; (4) the various documents concerning the patent application (or patent) submitted by any parties and the documents produced by the People's Courts etc. after examining these documents in the course of examination of the patent application or in the valid term of the patent right; and (5) Other relevant documents.

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			The above-mentioned documents, after being properly handled, established and filed, constitute important components of the file. (Examination Guidelines Part V Chapter 4, Section 2.2) □ The patent application file is a true record of the legal procedures of the examination and approval, reexamination and invalidation declaration of the patent, as well as the relevant procedures resulting from disputes over ownership of right. (Examination Guidelines Part V Chapter 4, Section 4)
(6) Disclosure requirements for prior art documents	o where the person requesting the grant of a patent has knowledge of any invention(s) (inventions as provided in Article 29(1)(iii), hereinafter the same shall apply in this item) related to the said invention, that has been known to the public through publication at the time of filing of the patent application, the statement shall provide the source of the information concerning the invention(s) known to the public through publication such as the name of the publication and others.	o Background art refers to existing technology deemed to be beneficial in understanding technical implications of an invention and useful in prior art searches and examination. o Description requirements of background art are as follows: (1) Background art shall be related to an invention for which patent protection is sought. An invention for which patent protection is sought means an invention	□ This part shall indicate the background art which can be regarded as useful for the understanding, searching, and examination of the invention, and when possible, cite the documents reflecting such art, especially the prior art documents which contain the technical features stated in the preamble portion of the independent claim of the invention, that is, the closest prior art documents. The documents cited in the description may be either patent documents

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	(Article 36(4)(ii) of the Patent Act) o When there is no information on prior art documents to be described at the time of filing, it is desirable to describe the effect with reasons in the detailed explanation of the invention. For example, when the prior art that an applicant knows is not the one relating to the invention described in a publication, that effect shall be described. In addition, the effect that there is no information on prior art documents to be described and reasons can be shown in a written statement. (Examination Guidelines Part I Chapter 3. Section 3.2 (3)	specified in the scope of claim. Whether background art is related to an invention for which patent protection is sought shall be determined based on consideration of technical tasks of the invention, technical solutions and effects of the invention as a whole. (2) An applicant shall describe the background art of the claimed invention in detail in【Background Art】of detailed description of the Invention and, if possible, disclose information on prior art literature containing such background art. As for prior art literature, patent literature shall contain publication number and disclosure date whereas non-patent literature shall disclose name of author, name of the publication (thesis title), publisher and publication date. Even though only information on prior art literature is disclosed without the detailed description of background art, if the concerned prior art literature discloses proper background art relating to the invention, the	or non-patent literature, such as periodicals, magazines, manuals, books etc. Where a patent document is cited, at least the country of origin and the publication number, and preferably the publication date, of the patent document shall be clearly indicated. Where a non-patent document is cited, the title and the detailed source of the document shall be clearly indicated. Citation of documents shall further comply with the following requirements: (1) the documents cited shall be publications, either in paper form, or in electronic form; (2) for non-patent documents and foreign patent documents, the publication date shall be earlier than the filing date of the application; for Chinese patent documents, the publication date shall be no later than the publication date of the application; and (3) where the cited document is a foreign patent or non-patent document, the source and relevant information of the cited document shall be indicated in the original language as used for its publication. If

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		background art of the invention shall be deemed to be disclosed. Where there exist multiple prior art documents, documents closest to the invention shall be disclosed. (3) Where no available background art to an invention exists since it has been developed on novel ideas totally different from existing technology, disclosure of background art of the concerned invention can be replaced with disclosure of existing technology in the closest technical field or with the statement of the intent that no relevant background art can be found. (Examination Guidelines Part II. Chapter 3. Section 4.2.)	necessary, Chinese translation thereof shall be provided, and put in parentheses. (Examination Guidelines Part II Chapter 2, Section 2.2.3) □ It should be noted that, for the convenience of examination and straightforward understanding of the invention by the public, those contents which are indispensable for the description to comply with the requirement of Article 26. 3 cannot be described by only reference to other documents, but shall be substantially described in the description. (Examination Guidelines Part II Chapter 2, Section 2.2.6) □ The relevant contents of the prior art described in the preamble portion of the claim shall be contained in the part of "Background Art" of the description, and the documents reflecting the background art shall be cited. If, through search, the examiner finds any reference documents which are even more related to the claimed subject matter of the invention than the prior art cited in the initial description by the applicant, the applicant

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			shall be allowed to amend such part of the description by adding the contents of these documents and citing the documents. At the same time, the contents describing the unrelated prior art shall be deleted. (Examination Guidelines Part II Chapter 8, Section 5.2.2.2)
(7) Disclosure requirements for priority documents	o For saying that the claimed invention of the application claiming priority in Japan is disclosed by the whole application documents of the first application, the claimed invention of the application in Japan understood by consideration of the whole description of the application documents of the application in Japan shall be within the scope of the matters disclosed in the whole filing documents of the first application. o It shall be determined whether the claimed invention of the application in Japan is within the scope of the matters disclosed in the whole filing documents of the first application or not, depending on the examples of new	o Where a priority claim under the Treaty is legitimate, the same invention as the invention described in the initial application filed in one of the countries under the Treaty shall retain the same filing date as the filing date of the initial application in accordance with Articles 29, 36 of the Patent Act. Any invention excluded in the initial application filed in one of the countries under the Treaty shall not take the same filing date as the filing date of the initial application even if the priority claim for the invention is valid. (Note) Except for the certain cases mentioned in the Patent Act, the filing date of an	□ The technical solution defined in the claims of the subsequent application filed in China may enjoy the right of priority of the first foreign application so long as it has been described in that foreign application. It is not necessary for said technical solution to be contained in the claims of that first foreign application. (Examination Guidelines Part II Chapter 3, Section 4.1.2) □ If the technical solution described in the claim of the later application is clearly described in the documents be assured that the earlier application of the earlier application, it shall have the same subject matter as the later application. The examiner

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	matters. (Examination Guidelines Part Ⅳ Chapter 1. Section 4.1)	application claiming a priority under the Treaty shall be deemed to be the actual filing date. For example, in applying the provisions regarding a claim for non-prejudicial disclosure in Article 30 of the Patent Act, if the applicant did not file an application claiming a priority under the Treaty within six months after the disclosure of the application before filing an initial application in one of the countries under the Treaty, the applicant may lose novelty for his/her invention even if the applicant filed an application claiming a priority within one year from the filing date of the initial application filed in one of the countries under the Treaty (Examination Guidelines Part VI Chapter 3. Section 5) .	cannot refuse to accept the claim of priority right based on the view that such technical solution is not contained in the claims of the earlier application. □ By the phrase "clearly described", it does not mean the way of i1lustration is completely identical. It is sufficient if the technical solutions described in the claims of the application have been set forth. However, where one or more technical features of said technical solutions are just generally or ambiguously described in the earlier application, or where there is only a hint in the earlier application, if the detailed description of such technical features is described in the application claiming for the priority right, and a person skilled in the art cannot directly and unambiguously derive it from the earlier application, the earlier application cannot serve as the basis for claiming the right of priority. (Examination Guidelines Part II Chapter 8, Section 4.6.2)

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(8) Disclosure requirements for internal priority documents	o It cannot be said that the claimed invention of the later application claiming priority is disclosed in the description etc. originally attached to the request of the earlier application unless the claimed invention of the later application, which is understood by considering what is disclosed in the description etc. of the later application, is within the scope of matters disclosed in the description etc. originally attached to the request of the earlier application. o It is determined whether the claimed invention of the later application is within the scope of matters disclosed in the description etc. originally attached to the request of the earlier application or not, depending on the examples of new matters. (Examination Guidelines Part Ⅳ Chapter 2. Section 4.1)	o As for an invention identical with the one disclosed in the specification or drawing(s) of the prior application which forms the basis of the priority claim, among the inventions in the application claiming a domestic priority, the subsequent application is deemed to have been filed at the time of filing the prior application in applying the following requirements. ① Article 29(1),(2) of the Patent Act(Novelty, inventive Step) ② The main sentence of Article 29(3) of the Patent Act(Status of enlarged concept of novelty) ③ Article 30(1) of the Patent Act(Exception to the public disclosure) ④ Article 36(1) to (3) of the Patent Act(Prior application, the same purport as Article 7 (3), (4) of the Utility Model Act) ⑤ Article 96(1)(3) of the Patent Act(Scope where the effect of a patent right does not extend) ⑥ Article 98 of the Patent Act(Use of	□ If the subject into any of the following matter of the first Chinese application circumstances. it cannot be taken as the for claming domestic priority: (1)where the applicant has claimed foreign or domestic priority, unless the claim for foreign or domestic priority was not successful; (2) where it has been granted a patent right; (3) where it is the subject matter of a divisional application filed under Rule 42. It should be noted that where a domestic priority is claimed, the first Chinese application as the basis of the domestic priority shall be deemed withdrawn as from the date on which the subsequent application is filed. (Examination Guidelines Part II Chapter 3, Section 4.2.1) □ Definition of invention for the same subject matter and effect of right of internal priority is the same as the relevant provision of foreign priority. (Examination Guidelines Part II Chapter 3, Section 4.2.2 and 4.2.3)

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		patented invention, registered utility model and registered design of another person, Conflict between a patent right with a design right, the same purport as Article 23 of the Utility Model Act and Article 45 of the Design Protection Act) ⑦ Article 103 of the Patent Act (Non-exclusive license by prior use) ⑧ Article 105(1), (2) of the Patent Act(Non-exclusive license after the expiry of the duration of the design right, the same purport as Article 52(3) of the Design Protection Act) ⑨ Article 129 of the Patent Act(Presumption of the patented process to manufacture) ⑩ Article 136(4) of the Patent Act (Trial for a correction) o Where a prior application contains a domestic priority claim or a priority claim under the Paris Convention, recognizing the priority claim twice to inventions disclosed in the application which forms the basis of such claim in a subsequent application would technically mean the extension of the priority	

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		period. Therefore, the priority claim of the above-mentioned invention shall not be acknowledged, whereas the effects of the priority claim shall be on inventions newly added to the prior application. (Note) To enjoy the effects of the priority claim even on the inventions disclosed in the basic application of the prior application, the multiple priority claims shall be made based on the basic application of the prior application in a subsequent application. (Examination Guidelines Part VI Chapter 4. Section 5)	
(9) Prohibited matters or inadmissible elements (e.g. superfluous elements, reference to the spirit or essence of the invention, violation of public order, morality or public health, trademarks)			

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(i) Violation of public order, morality or public health	o Article 32 of the Patent Act provides that any invention that is liable to injure public order, morality or public health shall not be patented. o The matters of the description and the contents of the drawings attached to the application whose publication in the Patent Gazette is, in the view of the Commissioner of the Patent Office, liable to contravene public order or morality are not published in the Patent Gazette. (Article 32, Article 64 (2) of the Patent Act)	o For reasons of public interest, Article 32 of the Patent Act stipulates that a patent would not be granted for「inventions that have risks to contravene public order or morality or to injure public health」even if the invention falls within the patentable subject matter of Article 29 (1) to (2). As a result, a patent cannot be granted for an invention which falls under the Article 32 without having to consider patentability requirements under Article 29 of the Patent Act. (Examination Guidelines Part III Chapter 6. Section 2) o Article 32 of the Patent Act (Unpatentable Inventions) Inventions that have risks to contravene public order or morality or to injure public health shall not be patentable, notwithstanding Article 29 (1) to (2).	□ No patent right shall be granted for any invention-creation that is contrary to the laws or social morality or that is detrimental to public interest. (Article 5.1) □ A patent application is considered partially contravening Article 5 .1 if a part of the application contains certain content that is contrary to the laws or social morality or that is detrimental to public interest and the rest part of the application is not. In respect of such an application, the examiner during examination shall notify the applicant to amend his application and delete the part contravening Article 5 .1 .If the applicant refuses to delete the part that is contrary to the laws, it cannot be granted a patent right. (Examination Guidelines Part II Chapter 1, Section 3.1.4) □ For any of the following, no patent right shall be granted: (1) scientific discoveries; (2) rules and methods for mental activities; (3) methods for the diagnosis or for the treatment of diseases;

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			(4) animal and plant varieties; (5) substances obtained by means of nuclear transformation; (6) designs of two-dimensional printing goods, made of the pattern, the color or the combination of the two, which serve mainly as indicators. (Article 25.1)
(ii) Trademarks	o Where a claim includes a statement to define a product by means of a trademark, such a statement is deemed as making unclear the claimed invention unless it is clear to a person skilled in the art that the product had been maintained a certain quality, composition and structure, etc., at least for a certain period of time to the filing date. (Examination Guidelines Part I Chapter 1. Section 2.2.2.3 (2) ⑤)	o In principle, stating the trademark or name of a product is not allowed in a specification. However, even though the trademark or name of a product is disclosed, where the concerned product can be easily secured; the change in quality or composition of the product with the trademark and name is less likely to change the content of the invention, stating the trademark or name of the product shall be exceptionally allowed. (Examination Guidelines Part II. Chapter 3. Section 5.)	□ The title of the invention shall not contain name of person, name of place, trademark, model, name of goods, or the like, nor shall it contain commercial advertising. (Examination Guidelines Part II Chapter 2, Section 2.2.1) □ The description shall avoid defining a substance or product by use of a registered trademark. (Examination Guidelines Part II Chapter 2, Section 2.2.7)

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(iii) Others			□ The description of the invention shall use standard terms and be in clear wording, and shall not contain such references to the claims as: "as described in claim …"， nor shall it contain commercial advertising. (Rule 17.3) □ No commercial advertising shall be used in describing the technical problem that the invention aims to solve. (Examination Guidelines Part II Chapter 2, Section 2.2.4) □ The expression of the claims shall be concise. Except for the technical features, a claim shall neither to the cause or reason, nor shall it contain unnecessary explanations as commercial advertising. (Examination Guidelines Part II Chapter 2, Section 3.2.3)

COMPARATIVE ANALYSIS

1. Legal bases concerning the requirements for disclosure and claims

(1) Relevant provisions in laws and implementing regulations

The lists of the relevant provisions in laws and implementing regulations are shown in the Comparison Outline.

(2) Examination guidelines, manuals, standards, etc.

The items of the examination guidelines, manuals, standards, etc. relevant to the requirements for disclosure and claims in each of three Offices are shown in the Comparison Outline.

(3) Background and purpose of the statutory requirements for disclosure

Three offices coincides in that the object of Patent system is to promote the development of technology, and the sufficient disclosure of the invention to the public is regarded as the counterpart for the temporary exclusive patent right granted in return to the applicant.

2. Description of the invention

(1) General, Matters to be stated in the description and their arrangement

"Technical field", "Background art", "Contents of the invention"(JPO: "Summary of Invention", KIPO: "Content of Invention"), "Description of embodiments"(KIPO: "Detailed Content for Working of Invention", SIPO: "specific mode for carrying out the invention"), may be stated in the description in all three offices.

JPO and SIPO states that the "Technical problem" , "Technical solution", and "the advantageous effect of the invention" may be included in the description.

Only in KIPO, the scope of patent claims may not be disclosed at the time of filing an application if necessary.

In JPO and KIPO "Industrial applicability" may be stated in the description.

(2) Title of the invention

All three offices coincide in that the title of the invention should be concise.

In KIPO and SIPO, the title of the invention in the description shall be the same as appears in the request. When the title of the invention differs between the description and the request, an examiner modifies the title in the description in KIPO, while an examiner asks the applicant to amend the title in the description in SIPO. In JPO, on the other hand, the title of invention does not appear in the request.

In SIPO, the title of the invention shall be made in accordance with the following requirements:

(1)the title of the invention in the description shall be the same as appears in the request. Normally a title shall contain no more than 25 Chinese characters; in particular cases, for example, for some applications in the field of chemistry, the title can be allowed to contain 40 Chinese characters at the most;

(2)it shall use technical terms generally adopted in the technical field to which the invention pertains, preferably technical terms used in the International Patent Classification, and non-technical terms shall not be used;

(3) it shall clearly, concisely, and comprehensively reflect the subject matter and the kind (product or process)of the invention for which protection is sought so as to facilitate the classification of the application, and

(4) the title shall not contain name of person, name of place, trademark, model, name of goods, or the like, nor shall it contain commercial advertising.

(3) Explanation of the invention

(i) Technical field, industrial field of utilization

JPO states that as "technical field to which an invention pertains," an application shall state at least one technical field to which a claimed invention pertains.

KIPO states that the technical field of the invention for which patent protection is sought shall be stated clearly and briefly, and At least one technical field shall be indicated, and the applicant may refer to the IPC.

SIPO states that the technical field to which the technical solution for which protection is sought pertains should be specified, and the technical field of the invention usually relates to the lowest position in which the invention may be classified according to the IPC.

(ii) Prior art, background art

Three offices coincide in that background prior art is useful for understanding the claimed invention and require the statement of background art.

Only SIPO commented on the relationship between the background art and the preamble portion of the independent claim of the invention.

JPO states that the statement of the detailed explanation of the invention shall provide the source of the information concerning the invention(s) known to the public through publication.

KIPO states that An applicant shall describe the background art of the claimed invention in detail in【Background Art】of detailed description of the Invention and, if possible, disclose information on prior art literature containing such background art.

SIPO states that the part entitled with "Background art" in the description shall indicate the background art which can be regarded as useful for the understanding, searching, and examination of the invention, and when possible, cite the documents reflecting such art, especially the prior art documents which contain the technical features stated in the preamble portion of the independent claim of the invention, that is, the closest prior art documents.

(iii) Problems to be solved by the invention

In JPO and KIPO, explicit description of problems to be solved by the invention is not necessary if a person skilled in the art can understand the technical tasks based on other description and the technical knowledge, or if an invention is not based upon recognition of a problem to be solved.

SIPO states that the description of an application may contain one or more technical problems which the invention aims to solve.

(iv) Means for solving a technical problem

In JPO and KIPO, explicit description of means for solving a technical problem is not necessary if a person skilled in the art can understand them based on other description and the technical knowledge, or if an invention is not based upon recognition of a problem to be solved.

SIPO states some examples of the circumstances in which the technical solution described in the description is regarded as unable to be carried out due to lack of technical means to solve the technical problem in the Comparison Outline.

(v) Working example

(a) What is a mode

JPO states that the "mode for carrying out the invention" referred to in this Guideline is the same as prescribed in the Regulation 5.1-(a)(v) under PCT (Patent Cooperation Treaty).

KIPO states that the detailed content for working the invention shall contain the composition of the invention as well as its functions. Stating the function might be more appropriate than stating the composition of the invention in some technical field.

SIPO states that the preferred mode for carrying out the invention shall embody the technical solution adopted in the application for solving the technical problem, and shall also describe the technical features of the claims in detail so as to support the claims and to enable a person skilled in the art to carry out the invention.

(b) Best mode contemplated by inventor

All three offices coincide in having no requirement to describe the best mode.

(vi) Industrial applicability

In all three offices, stating industrial applicability is not treated as a requirement.

KIPO states that where it is hard to determine whether the claimed invention is industrially available, the method of industrial applicability, manufacturing method or utilization method shall be stated in the box for 〔Industrial Applicability〕 .

(vii) Advantageous effects or merits of the invention

JPO states that statement of an advantageous effect could support the existence of inventive step, and could substitute the statements of the problems. However, stating an advantageous effect is not a requirement.

KIPO states that an applicant shall state superior effects as far as the

applicant knows since such effects can be recognized for confirmation of inventive step of the invention.

SIPO states that the description shall clearly and objectively state the advantageous effects of the invention as compared with the prior art.

(4) Brief description of the drawings

Each of the three offices explains in the Comparison Outline how the brief description of the drawing should be.

(5) Disclosure of the invention (means of solving the problems) - enablement requirement

(i) Basic concept in each category of invention

(a) An intention of a product

JPO states that the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to make and use the product.

Similarly, KIPO states that the detailed description of the invention shall contain the clear and full explanation on items allowing a person skilled in the art to produce the product, and a product invention shall be fully described so that a person skilled in the art can use the product disclosed in the claims.

SIPO states that where the claimed invention is a chemical product itself, the description shall describe the identification, preparation and use of the chemical product. If a person skilled in the art is unable, based on the prior art, to predict that the use and/or its technical effect stated in the invention can be carried out,the description shall sufficiently provide qualitative or quantitative data of experimental tests for the person skilled in the art to be convinced that the technical solution of the invention enable the use to be carried out and/or the effect as expected to be achieved.

(b) An invention of a process

JPO states that for any type of process inventions, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to use the process based on the statements of the description and drawings, as well as the common general knowledge as of the filing.

KIPO states that the detailed description of the invention shall contain the

clear and full explanation on items allowing a person skilled in the art to use the process.

SIPO states that for a chemical process invention, regardless of a process for preparing a substance or any other process, the raw materials, procedures and processing conditions adopted in the process shall be described. If necessary, the effect of the process on the property of the title substance shall be described so as to enable a person skilled in the art, when carrying out the invention according to the process described in the description, to solve the problem which the invention is intended to solve. As for the raw materials used in the process, the components, property, manufacturing process or source of it shall be described in such a manner that a person skilled in the art can obtain it.

- An invention for producing a product

JPO states that i) starting materials, ii) process steps and iii) final products shall in principle be stated in such a manner that a person skilled in the art can produce the product based on the statements of the description and drawings, as well as the common general knowledge as of the filing. Of these three factors, however, the iii) final products may be understood from statement of materials and process steps, and in such a case, may be omitted.

Similarly, KIPO states that raw materials for manufacturing the product and a series of the detailed steps shall be fully explained. Though not specifically described, the product manufactured through the concerned process shall be clearly described, except for the case where the product is easily understood based on the raw materials or detailed manufacturing steps.

SIPO states that for a chemical process for preparing a substance, the raw materials, procedures and processing conditions adopted in the process shall be described. If necessary, the effect of the process on the property of the title substance shall be described so as to enable a person skilled in the art, when carrying out the invention according to the process described in the description, to solve the problem which the invention is intended to solve. As for the raw materials used in the process, the components, property, manufacturing process or source of it shall be described in such a manner that a person skilled in the art can obtain it.

- An invention of use

JPO states that the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to use the process based on the statements of the description and drawings, as well as the common general knowledge as of the filing.

SIPO states that as for a use invention of a chemical product, the description shall describe the chemical product to be used, the method for using the product and the effect to be achieved to enable a person skilled in the art to carry it out. If a person skilled in the art cannot predict the use according to the prior art, the description shall sufficiently provide data of experimental tests for a person skilled in the art to be convinced that the product is useful for said use and can solve the technical problem or achieve the technical effect as ex-pected.

(ii) Amount of detail needed to satisfy the sufficiency of description requirement

(a) Functional vs. structural description

KIPO states that the detailed technical means itself shall be stated, not the mere function or effect of the means. However, stating the function might be more appropriate than stating the composition of the invention in some technical field like computer field. In JPO, where an invention is defined by function, it is required for the detailed explanation of the invention to explicitly state a specific means which is capable of performing the function unless a person skilled in the art can understand without such an explicit statement. SIPO states that "An invention of a product" shall usually be defined in terms of the structural features of the product, and features of function or effect shall be avoided as far as possible to be used in defining the invention. It is only when a certain technical feature cannot be defined by a structural feature, or it is more appropriate to be defined by a feature of function or effect than by a structural feature, and the function or effect can be directly and affirmatively verified by experiments or operations as stated in the description or by customary means in the art, that definition by features of function or effect can be permissible.

JPO states that where a functional definition in a claim is neither standard nor commonly used by a person skilled in the art, the detailed explanation of the invention shall state the definition of such function or characteristics, etc. or the method for testing or measuring such function.

JPO also states that if a person skilled in the art cannot understand how to make another product defined by its function other than products of which manufacturing method is concretely stated in the detailed explanation of the invention, the statement of the detailed explanation of the invention is violating the enablement

requirement.

(iii) Definition of "person skilled in the art"

(a) whether the same as for inventive step

(b) relevant art

JPO and KIPO have separate definitions of “person skilled in the art” for disclosure requirement and inventive step respectively. On the other hand, SIPO have the same definition of “person skilled in the art” for disclosure requirement and inventive step.

(iv) Use of prior art in determining enablement

In JPO, the common general knowledge is considered in assessing whether a person skilled in the art can carry out the claimed invention.

KIPO states that when stating technical tasks or particular effects of the invention, prior art may be used.

SIPO states that the description shall enable a person skilled in the art to carry out the invention. It means that the person skilled in the art can, in accordance with the contents of the description, carry out the technical solution of the invention, solve the technical problem, and achieve the expected technical effects. Since the person skilled in the art is aware of all the common technical knowledge, indirectly common general knowledge is considered in determining whether above mentioned requirement is met or not.

SIPO states that the content that is used as background art can be added to the description. Those contents which are indispensable for the description to comply with the requirement of Article 26.3 cannot be described by only reference to other documents, but shall be substantially described in the description.

(v) Incorporation by reference

In all three offices, references to other documents should not be substituted for

the statement in the description.

In KIPO, incorporation by the reference is not generally allowed.

SIPO states that for those contents which are indispensable for the description to comply with the requirement of Article 26.3 cannot be described by only reference to other documents, but shall be substantially described in the description.

(vi) Risk of future "unenablement"

There is no difference among all three Offices on the following points that using trademark or registered trademark in description with risk of future unenablement is insufficient for enablement requirement, and that such using may be rejected.

(vii) Disclosure requiring experimentation

(a) Reasonable experimentation

JPO states that if “a person skilled in the art” cannot understand how to carry out the invention on the basis of teachings in the statements of the description and drawings, as well as the common general knowledge as of the filing, then, such a detailed explanation of the invention should be deemed insufficient for enabling such a person to carry out the invention. For example, if a person skilled in the art who intends to work the invention would have to make trials and errors, beyond the reasonably-expected extent, such a detailed explanation of the invention should not be deemed sufficient.

SIPO states that the requirement of enablement cannot be met if the description sets forth a concrete technical solution but without experimental evidence, while the solution can only be established upon confirmation by experimental result. For example, in general, the invention of a new use for a known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of enablement cannot be met.

KIPO states that where the claimed invention is explained by using experiment data, test methods, test/measurement tools and test conditions shall be disclosed in detail so that a person skilled in the art can easily reproduce the experiment results. Similarly, SIPO states that as for the property data showing the effect of the invention, the method used to measure it shall be specified when various measuring methods for it in the prior art yield different results. If it is a special method,

it shall be explained in detail to enable a person skilled in the art to carry it out.

(viii) How to make - availability of starting materials

JPO states that i) starting materials, ii) process steps and iii) final products shall in principle be stated in such a manner that a person skilled in the art can produce the product based on the statements of the description and drawings, as well as the common general knowledge as of the filing.

KIPO states that as for chemical substance invention, its embodiment shall include the detailed response conditions necessary for manufacturing the substance invention such as the starting material, temperature, pressure, inflow and outflow and the result of the direct experiment under such conditions.

SIPO states that the description of a chemical product invention shall describe at least one preparation method and disclose the raw materials, procedures, conditions and specially adapted equipment used for carrying out the method so as to make it possible for a person skilled in the art to carry it out. As for the raw materials used in the process, the components, property, manufacturing process or source of it shall be described in such a manner that a person skilled in the art can obtain it.

(ix) Taking into consideration of later submitted experimental data

In SIPO, later submitted experimental data shall not be taken into consideration in judging whether or not the description is sufficiently disclosed, while in JPO and KIPO, examiner may refer to such data.

JPO states that the applicant may submit a certificate of experimental results to support arguments presented in the written opinion. However, a deficiency of the matters stated in the detailed explanation of the invention cannot be overcome by submitting the experimental results later.

KIPO states that a written argument or other documents including experiment results in response to the notification of the grounds for rejection shall not be a part of the specification of the application. However, as these documents are submitted to clarify or verify the legitimacy of matters in the detailed description, an examiner may refer them to decide the patentability of the concerned application.

SIPO states that whether or not the description is sufficiently disclosed is judged on the basis of the disclosure contained in the initial description and claims, any

embodiment and experimental data submitted after the date of filing shall not be taken into consideration in principle.

(x) How to use - utility and operability

JPO states that for an invention of a product, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to use the product. Also, it is required to state how each matter to define the invention of the product works (role of each matter) (namely, "operation" of each matter) if a person skilled in the art needs it for using the product of an invention. In the case of use inventions (e.g., medicine) using the characteristics of a product etc., the working examples supporting the use are usually required.

KIPO states that where it is hard to determine whether the claimed invention is industrially available, the method of industrial applicability, manufacturing method or utilization method shall be stated in the box for 〔Industrial Applicability〕. Since industrial applicability can be well inferred from other descriptions of the specification, additional description on industrial applicability may not be necessary.

SIPO states that if the application relates to a product, the product shall be able to be made industrially and solve a technical problem; if it relates to a process, the process shall be able to be used industrially and solve a technical problem.

(xi) Proof of enablement

In JPO, where an examiner makes a notice of reason for refusal on the ground of violation of enablement requirement under Article 36(4)(i), (s)he shall identify the claim which violates the requirement, make clear that the ground of refusal is not a violation of Ministerial Ordinance requirement but a violation of enablement requirement under Article 36(4)(i), and point out particular descriptions, if any, which mainly constitute the violation. The examiner shall explain the reason why he/she determines that the claimed invention fails to meet the enablement requirement, while showing the grounds for such determination

It is recommended that the reason above should be supported by reference document. Such documents are, in principle, limited to those that are known to a person skilled in the art as of the filing.

Upon receiving a notice of reasons for refusal due to violation of the enablement requirement, the applicant may make an argument or clarification by submitting a written opinion, certificate of experimental results, and the like.

KIPO states that when an examiner intends to notify a ground for rejection citing the violation of the enablement requirement and description requirement of this chapter, any violation of such requirements shall be specified and notified. Especially, where a ground for rejection is to be notified based on the violation of enablement, the corresponding claims shall be specified.

SIPO states that if the examiner can reasonably doubt that the invention does not meet the requirement of sufficient disclosure, he shall invite the applicant to make a clarification. Whether or not the description is sufficiently disclosed is judged on the basis of the disclosure contained in the initial description and claims, any embodiment and experimental data submitted after the date of filing shall not be taken into consideration in principle.

(xii) Others

In JPO, at least one mode for carrying out the invention needs to be stated in terms of "claimed invention," but the mode for carrying out the invention is not needed for all the embodiments or alternatives included within the claimed invention.

However, if the examiner can suppose the other specific example which can be included in the claimed invention and can show well-founded reasons that a person skilled in the art would be unable to carry it out even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, then, the detailed explanation of the invention cannot be deemed to be stated clearly and sufficiently as to enable a person skilled in the art to work the invention.

SIPO states that when the description sets forth a concrete technical solution but without experimental evidence, while the solution can only be established upon confirmation by experimental result, then the technical solution described in the description is regarded as unable to be carried out due to lack of technical means to solve the technical problem.

For example, in general, the invention of a new use for a known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of enablement cannot be met.

3. Claims

(1) General

All three offices coincide have such provisions in laws that the claim shall be supported by the description and shall define the invention clearly. Three offices also coincide in that the scope of protection of the patented invention shall be determined by the terms of the claims. Only KIPO states that any application may attach the specification not stating the scope of claims.

SIPO states that the description and the appended drawings may be used to interpret the content of the claims.

(2) Claiming format

(i) Number of claims

JPO and KIPO states that claims are not limited in number, provided that requirements for unity of inventions are met.

SIPO states that the number of claims shall be reasonable for the purpose of concise.

(iii) Structure of claims (e.g. Markush claims, Jepson type claims)

In SIPO, an independent claim of an invention shall contain a preamble portion and a characterizing portion. However, an independent claim may be presented in a different manner where the above mentioned manner is not appropriate to be followed because of the nature of the invention.

A Markush type claim is accepted in all three offices.

All three offices require the description of Markush type claims related to chemical substances to hold similar characteristics or functions and this requirement is met if the following requirements are all met:

① All the matters shall hold the common characteristics or vitality

② All the matters shall share the important chemical structure, or all the matters shall belong to the group of chemical substances deemed as one group in the technical

field to which the invention pertains.

JPO also requires the alternatives to have similar characteristics or functions with one another for the claims other than those relating to chemical substances.

(iv) Categories

All Three offices coincide in that claims are divided into two basic kinds: product claims and process claims.

In JPO, such term in a claim as "system" (e.g., "telephone system") is interpreted as those meaning the category of a product, while in KIPO and SIPO, such claims can be interpreted as those meaning the category of a product or a process depending on the circumstances, and such claims could cause make the category of the claimed invention is unclear.

In all three offices, process claims include methods of use. However, in KIPO, such a claim which ends with the term “use” is not allowed, while JPO and SIPO interpret such a claim as that for a method of use.

(iv) Independent and dependent claims

(v) Arrangement of claims

JPO has neither specific classification nor treatment for “independent claims ” and “dependent claims”. Instead, JPO has classification of “independent form claims” and “dependent form claims” which is defined based on whether the claim refers to other claims or not. The two types of claims differ only in the form of the statement, and are treated in the same manner.

On the other hand, KIPO and SIPO have definition of “independent claims ” and “dependent claims”, where “dependent claims” means those claims which not only refer to other claims formally, but also add the technical feature to the claims which it refer to. Both in KIPO and SIPO, a claim appearing in the form of dependent claim, but the subject matter disclosed in the claims referred to is substituted with other matter, instead of adding the technical feature to it, is treated as an independent claim.

JPO and KIPO states that dependent form may be utilized to avoid the redundant

description of the same matter.

KIPO states that in a claim that quotes not less than two claims, the quoted claim shall not re-quote two or more other claims. SIPO comments that in the situation that a claim quotes not less than two claims, and the quoted claims re-quote two or more other claims, if unclarity issue arises, the examiner could give objection on the reason of unclarity and reject it on the same reason. If it does satisfy the criteria of clarity, the examiner could give objection on implementation rule 22(2), but they may not reject the application..

In JPO, such a manner of quoting in the claims is allowed.

Three offices coincide in that any dependent (JPO: dependent form) claims shall only refer to the preceding claims. Three offices also coincide in that any multiple dependent claims, which refer to two or more claims, shall refer to the preceding claims in the alternative form only.

SIPO states that an invention shall have only one independent claim, which shall precede all the dependent claims relating to the same invention, and all the dependent claims that depend directly or indirectly on a certain independent claim shall be grouped together after the independent claim and before another independent claim.

But one application can have several inventions as long as they get unity, correspondingly, one application can contain several independent claims.

(3) Clarity

(i) Basic concept

All three offices state that description in claim should be clear in order to determine the scope of protection of the claimed invention, and to conduct the determination of patentability.

SIPO states that according to Chinese Patent Law, Article 59, the extent of protection of the patent right for invention shall be determined by t claims. The description and the appended drawings may be used to interpret claims. According to Chinese Patent Law, Article 26.4, the claims shall define the extent of the patent protection sought for in a clear and concise manner.

In all three offices, the category of each claim shall be clear.

KIPO states that whether the claimed invention is disclosed clearly and concisely shall be determined by a person skilled in the technical field to which the invention pertains.

SIPO states that the requirement that the claims shall be clear means, on the one hand, individual claims shall be clear, and on the other hand, the claims as a whole shall be clear as well which means that the reference relations between the claims shall be clear.

(ii) Indication of non-technical matters

In JPO, if Non-technical matter is stated in a claim as a whole, the description of the claims is considered not clear.

KIPO states there are cases where an invention is not clear and concise since items irrelevant of the technical composition of the invention.

SIPO states that the claims shall not contain any words or sentences that have no relation to the contents of the technical solution. Moreover, a claim shall neither contain unnecessary explanations as to the cause or reason, nor shall it contain commercial advertising, or any language belittling other persons or products of other persons..

(iii) Definition by function

JPO states that functional definition of the invention is allowed as far as the claimed invention can be clearly identified. And also states that although the scope of the invention is clear, if the matter defined by the function or characteristics, etc. is not sufficiently specified from a technical perspective, and the claimed invention cannot be examined precisely on the patentability requirements, clarity requirement is violated.

KIPO states that the claims with functional expressions cannot be allowed if the composition of the invention is not deemed to be clear. Cases where the composition of the invention is deemed to be clear even with functional expressions refers to ① where expressing claims functionally is necessary since the technical idea of the invention cannot be clearly disclosed only with the existing technical composition, ② where the meaning of the functional expressions are clearly specified by the description of the detailed description of the invention and description in drawings.

SIPO states that if the description merely states in vague terms that other alternative means may be adopted, but the person skilled in the art cannot understand what they might be or how they might be used, then definition by function in the claims is not permitted.

(iv) Definition by manufacturing process

All three offices coincide in that it is allowed to express the technical features of a product claim by manufacturing process, when the product claim cannot be or is difficult to be expressed otherwise.

JPO states that when examining a claim includes an expression defining a product by its manufacturing process, such an expression is considered to refers to the final product itself. If the structure or property, etc. of the product cannot be understood, the application is violating the clarity requirement.

KIPO states that where the invention is recognized to be unclear because of the failure in the composition of the product, an examiner shall notify a ground for rejection.

SIPO states that the actual definitive effect of the features of process depends on what impact they may impose on the claimed product per se.

(v) Definition by parameters

In JPO and KIPO, when a claim have expressions using a numerical limitation which only indicates either a minimum or a maximum such as “more than...“ or “less than...,“ or a numerical limitation which includes zero (0) such as “from 0% to 10%”, the scope of the invention could be unclear.

In KIPO, if the technical composition of a parameter invention having the figure that the parameter represents cannot be clearly understood only with the description, the invention shall be deemed not to be described clearly and concisely except for ① where the definition or technical meaning of parameter is clearly understood, ② where a ground for failure in the use of the concerned parameter is clearly shown, and ③ where the relation with the level of technology at the time of application filing is understood, considering a detailed description of the invention or drawing as well as the level of technology.

In SIPO, as for a chemical product which cannot be clearly described merely

by its structure and/or composition, the description shall further state the product by proper chemical/physical parameters and/or the manufacturing process, so that the claimed chemical product can be clearly identified.

(vi) Definition of terms

In KIPO and SIPO, it is allowed for an applicant to give a certain term used in the claims a special meaning by virtue of the definition in the description. In this case, SIPO states, the examiner should invite the applicant to amend as far as possible the claim whereby the meaning is clear from the wording of the claim alone. As for this point that claims should be as clear as possible for its own, JPO similarly states that content of statement of the claim by itself should not be made unclear particularly by using ambiguous or unclear terms or by stating the matter in only the detailed explanation of the invention, not in the claims, even though the matter can be made clear in the claims.

JPO states that where the statement of a claim is deemed clear by itself, the examiner should examine whether a term in the claim is defined or explained in the description or drawings, and evaluate whether such definition or explanation, if any, makes the statement of the claim unclear. Where the statement of a claim is unclear by itself, the examiner should examine whether a term in the claim is defined or explained in the description or drawings, and evaluate whether such definition or explanation, if any, makes the statement of the claim clear by considering the common general knowledge as of the filing.

(vii) Description in alternative form

JPO states that when matters used to specify the invention are expressed in alternatives and the alternatives have no similar characteristics or function with one another, it constitute a violation of clarity requirement.

JPO and KIPO has similar guidelines for the Markush type claims related to chemical substances. KIPO states that where more than two technical matters holding similar characteristics or functions, they can be disclosed in a single claim such as a Markush type claim. Where the description of Markush type claims is related to chemical substances, such matters can be deemed to hold similar characteristics or

functions if the following requirements are all met:

① All the matters shall hold the common characteristics or vitality

② All the matters shall share the important chemical structure, or all the matters shall belong to the group of chemical substances deemed as one group in the technical field to which the invention pertains

JPO states that such expressions where optionally added items or selective items are stated along with such words as "when desired," "if necessary," etc., or expressions including such words as "especially," "for example," "etc.," "desirably," and "suitably," would leave unclear the condition on which of the optionally added or selective items are chosen, thus allow the claim statements to be interpreted in many ways.

KIPO also states that where arbitrary additional items or selective items are disclosed along with expressions such as 'at one's will', 'if necessary', 'in particular', 'for example', 'and/or', the invention could be deemed unclear.

SIPO states similarly that such expressions as "for example", "had better","particularly", "if necessary", and the like shall not be used in a claim, since they will define different extents of protection in a single claim, making the extent of protection thereof unclear.

SIPO states that in generalization by means of parallel options, the specific options being put in parallel shall be comparable with each other in content. For example, a generic term cannot be connected in parallel with a specific term by the conjunction "or".

(viii) Use of ambiguous terms (e.g. definition by terms indicating extent)

In all three offices, an invention could be deemed unclear when the claim of the invention include unclear expression.

(ix) Claims attempting to define the invention by objectives to be attained

SIPO states that definition merely provided by objectives to be attained is equivalent to pure functional definition, and that claims of pure functional definition cannot be supported by the description, and therefore is not permitted.

(x) Definition using chemical or mathematical equations or formulas

All three offices coincide in that using chemical formula in claims is allowed. In JPO and SIPO claims may contain mathematical formula.

(xi) Devices or objects with limitations on their usage

JPO states that a claim directed to a use invention should not be deemed unclear merely because the statement expresses a general use, not a specific one.

KIPO states that where a claim includes an expression specifying a product by its use (i.e limitation of use), the examiner should interpret the claimed invention only as a product specially suitable for the use disclosed in the claim.

SIPO states that the actual definitive effect of the use definition shall depend on the impact it imposes on the claimed product per se.

(xii) References to description of the invention or to drawings

In all three offices, references to description of the invention or to drawings is exceptionally allowed in some cases.

JPO and KIPO gives an example of such allowed cases where the special relation between alloy elements is clearly described by reference to the drawings.

SIPO states that references to the description or drawings is only allowed when absolutely necessary. The situation “absolutely necessary” refers to the situation where a specific shape involved in an invention cannot be defined with words but only by drawings, in which case the phrase “as shown in figure ..“ or the like can be used in the claims.

SIPO states that the technical features mentioned in the claims may, in order to facilitate quicker understanding of the claim, make reference to the corresponding reference signs in the drawings.

(xiii) Others

JPO and KIPO states some cases where an invention is deemed unclear in the Comparative Outline.

(4) Support in description of the invention (extent of disclosure in the description and drawings vs. broadness of claims, e.g. the relationship between the scopes of working examples and claims, or the extent to which addition of working examples is permitted)

(i) Basic concept

(ii) Undue breadth

(a) disclosure problem

All three offices have the provision of the support requirement in their laws, and it is evaluated from the viewpoint of a person skilled in the art. Whether the claimed invention is substantially disclosed is important, not the formal correspondence.

JPO and KIPO comment that the purpose of the provision of the support requirement is to avoid granting a patent to the invention not disclosed in the detailed description of the invention.

In JPO, examination is performed by looking into whether or not the claimed invention exceeds the scope stated in the detailed explanation of the invention in such a way that a person skilled in the art could recognize that a problem to be solved by the invention would be actually solved. The consistency of expression is not important. The types that do not comply with the support requirement are shown in 3(4)(ii)(a) of the Comparative Outline.

In KIPO, an examiner shall determine whether an invention disclosed in claims are stated in a detailed description of the invention based on whether a person skilled in the technical filed to which the invention pertains can figure out the items corresponding to the invention disclosed in the claims are written in the detailed description of the invention.

SIPO states that the technical solution for which protection is sought in each of the claims shall be a solution that a person skilled in the art can reach directly or by generalization from the contents sufficiently disclosed in the description, and shall not go beyond the scope of the contents disclosed in the description. If the person skilled in the art can reasonably predict that all the equivalents or obvious variants of the embodiments set forth in the description have the same properties or uses, then the applicant shall be allowed to generalize the protection extent of the claim to cover all the equivalents or obvious variants. That the technical solution in a claim has the same

wording as that in the description does not mean the claim is necessarily supported by the description. In determining whether the generalization of a claim is appropriate, the examiner shall refer to the relevant prior art.

(b) claims reading on inoperative subject matter

JPO states that when the content disclosed in the detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention even in light of the common general knowledge as of the filing, the description of the claims is considered not to comply with the support requirement.

KIPO states that a clear and precise description of the claimed invention should lead a person skilled in the art to easily work the invention based on the technical knowledge, specification and drawings at the time of filing the application.

SIPO states that the technical solution for which protection is sought in each of the claims shall be a solution that a person skilled in the art can reach directly or by generalization from the contents sufficiently disclosed in the description, and shall not go beyond the scope of the contents disclosed in the description

(c) Relationship between working examples and claims

JPO states that the maximum expansion or generalization based on one or more specific examples in a detailed explanation of an invention varies with the characteristics of each technical field. It is necessary to first determine to which technical field the invention to be examined pertains, and what kind of common general knowledge as of the filing exists in the relevant technical field, and then make a judgment, for each application, as to whether the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the claimed invention.

KIPO states that if the content disclosed in a detailed description of the invention cannot be extended or generalized to the scope of the claimed invention based on the level of technology of the concerned technical field at the time of application filing, the claimed invention is not supported by the description.

SIPO states that the preferred modes for carrying out the invention are extremely important for supporting and interpreting the claims. The number of working examples shall be determined in accordance with the nature of the invention and the claimed extent of patent protection, etc.

SIPO also comments that where the technical solution of an invention is simple, if the part of description concerning technical solution has given a clear and complete explanation of the claimed subject matter, it is not necessary to repeat the explanation in the part of description concerning specific mode for carrying out the invention.

All three offices comments that the allowed extent of expansion or generalization based on specific examples in a description depends on the relevant technical field.

(d) Particular disclosure

- Definition by generic terms

In JPO, when judging whether the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the claimed invention, the judgment should be carefully done so as not to be too restrictive on the scope of claims by the specific examples stated in the detailed explanation of the invention. Moreover, the above mentioned judgment should not be done independently with the issue of whether a person skilled in the art could recognize that a problem to be solved by the invention would be actually solved.

KIPO states that if the items disclosed in claims are means or steps to perform particular functions, but specific composition corresponding to such means or steps is not disclosed in the detailed description of the invention, the claimed invention is not supported by the description.

SIPO states that claims are usually generalizations from one or more embodiments or examples as set forth in the description. If the person skilled in the art can reasonably predict that all the equivalents or obvious variants of the embodiments set forth in the description have the same properties or uses, then the applicant shall be allowed to generalize the protection extent of the claim to cover all the equivalents or obvious variants. In determining whether the generalization of a claim is appropriate, the examiner shall refer to the relevant prior art. An invention which opens up a whole new field of technology is entitled to more generality in the claims than one that is concerned with advances in a known technology.

- Definition by function

Both in JPO and SIPO, if the person skilled in the art can reasonably doubt that one or more means embraced in the definition by function cannot solve the technical problem aimed to be solved by the invention and achieve the same technical effect, then the definition by function as embracing the other alternative means or means incapable of solving the technical problem shall not be allowed in the claim.

SIPO also states that if the function is carried out in a particular way in the embodiments of the description, and the person skilled in the art would not appreciate that the function could be carried out by other alternative means not described in the description, the definition by function shall not be allowed in the claim. Furthermore, if the description merely states in vague terms that other alternative means may be adopted, but the person skilled in the art cannot understand what they might be or how they might be used, then definition by function in the claims is not permitted. In addition, claim of pure functional definition cannot be supported by the description, and therefore is not permitted.

- Definition by parameter

In JPO, for a claimed invention relating to a product defined by a numerical formula or numerical value, the content disclosed in the detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention if the detailed explanation of the invention does not contain a sufficient example or explanation, even in light of the common general knowledge as of the filing, so that a person skilled in the art could recognize that the problem could be solved by such numerical formula or within such range of numerical values. Note that if a claim only states a desirable numerical limitation, above mentioned violation shall not apply even when any specific examples within such range of numerical values are not stated in the detailed explanation of the invention.

In KIPO, if the cause and effect relationship between the parameter and effect as well as the relation between the technical problem and the parameter as its solution shall be clearly understood through comparative examples of the satisfactory cases as well as the unsatisfactory case of the parameter, claims with such a parameter on physical·chemical figure which is not the standard or prevalently used in the concerned technical field or a parameter in operation expression by using the correlation among multiple variables are acceptable.

In SIPO, when the chemical product has unclear structure and cannot be precisely characterized merely by using its chemical name, structural formula or

composition, it is permitted to use physical/chemical parameter(s) to characterize the claim of a chemical product. The said parameter (s) shall be clear enough.

(iii) Others

(a) Broadening claims

JPO states that if a matter, which is not described in the original description, etc., is added, in amending a matter specifying the claimed invention to be conceptually generic (for example, a matter specifying the invention is deleted), the amendment is not acceptable because it is not made within the scope of the matters described in the original description, etc..

KIPO states that if amended matters are not clearly understood based on the matters described in the specification or drawing(s), the amendment shall be deemed as addition of new matter. Such amendments are as follows: amendment of changing the scope of numerical limitation, amendment of changing features of an invention into a generic concept or subordinate concept, amendment of changing drawing(s), amendment of adding embodiments, or amendment of adding or changing purposes or effects of an invention.

SIPO states that as a principle, the amendment shall comply with Article 33. If, after the addition, change and/or deletion of part of the contents of the application, the information as seen by a person skilled in the art is different from those described in the initial application and such information cannot be directly or unambiguously derived from those described in the initial application, such amendment shall not be allowable..

(b) Narrowing and sub-generic claims

JPO states that if a matter, which is not described in the original description, etc., is singled out, in amending it to be conceptually specific (for example, a matter specifying the invention is added), the amendment is not acceptable because it is not made within the scope of the matters described in the original description, etc..

KIPO states that if amended matters are not clearly understood based on the matters described in the specification or drawing(s), the amendment shall be deemed

as addition of new matter. Such amendments are as follows: amendment of changing the scope of numerical limitation, amendment of changing features of an invention into a generic concept or subordinate concept, amendment of changing drawing(s), amendment of adding embodiments, or amendment of adding or changing purposes or effects of an invention.

SIPO states that when narrowing and sub- generic claims amendment have been done, we also need to judge whether the new claims comply with Article 33 according to the above principle.

(5) Other requirements

(i) Conciseness

JPO states that a claim is to be used for the basis of identifying the claimed invention which is a subject of examination of the patentability requirements. The statement of a claim also serves as a document of title defining the technical scope of a patented invention accurately. Therefore, it is adequate that the statement of the claim is concise as well as complying with Article 36(6)(ii) in order for the third parties to understand the claimed invention as easily as possible. This is the purpose of Article 36(6)(iii).

Article 36(6)(iii) does not deal with the inventive concept defined by the statement of the claim but deals with the conciseness of the statement itself. Also, it does not require plural claims as a whole be concise when an application contains two or more claims. Rather, it requires each claim be stated concisely.

There are some cases where it is violating the requirement of Article 36(6)(iii), if a claim is expressed in alternatives (e.g., a Markush-type claim for chemical compounds) and the number of alternatives is so large that the conciseness is extremely damaged.

KIPO states that inventions are not disclosed clearly and concisely in the following cases;

・Where the description of claims is too lengthy, such as the repetition of the same description and so that the description to which patent protection is sought is not clear and concise

・Where an invention is not clear and concise since items irrelevant of the technical composition of the invention such as commercial benefits, regions of sale, places of sale,

etc.

That an invention shall be concisely disclosed does not mean that the definition of the invention shall be concise. It means that the description itself in the claims shall be concise.

SIPO states that the requirement that the claims shall be concise means, on the one hand, individual claims shall be concise, and on the other hand, the claims as a whole shall be concise as well. For example, in one application there should not exist two or more claims that have substantially the same extent of protection.

The expression of the claims shall be concise. Except for the technical features, a claim shall neither contain unnecessary explanations as to the cause or reason, nor shall it contain commercial advertising.

In order to avoid undue repetition of the same content between one claim and another, where possible, the claims shall be drafted in the manner of referring to a preceding claim to the largest extent.

4. Drawings

(1) Substantive questions (e.g. status of drawings as part of the disclosure)

(2) Formal requirements

In all three offices, for patent applications, drawings may be attached when deemed necessary. On the other hand, an application of utility model registration must be attached with drawings.

In JPO and KIPO, drawings are separate from description, while in SIPO, drawings are a component part of the description.

All three offices have the forms of the drawings.

(3) Photographs in lieu of drawings (i.e. their status, categories accepted, conditions of acceptance, etc.)

All three offices coincide in that photographs may replace drawings under special circumstances.

JPO and SIPO state that color photographs are not acceptable, while KIPO

states that they may be accepted. However, color photographs submitted is converted into black and white or grayscale in the Patent Gazette, and legal determinations are done based on black and white or grayscale version.
JPO and SIPO accepts color photographs when it is attached only for reference.

5. Abstract

All three offices coincide in that abstracts shall not serve as a basis for subsequent amendments to the description or claims, nor shall they be used to interpret the extent of protection of the patent right.

6. Requirement for disclosure and claims in special fields

KIPO states that Examination Guidelines for inventions of special fields are managed by corresponding examination divisions.

(1) Computer program

Three offices coincide in that a computer related invention can be drafted as an invention of a process or an invention of a product.

In JPO, where information processing by software is concretely realized by using hardware resources," the said software is deemed to be "a creation of technical ideas utilizing a law of nature.

In KIPO, where software data processing is specifically realized by using a hardware, the data processing apparatus (device) operated in cooperation with the concerned software and the computer-readable media recording the operation method and the concerned software are the creation of technical ideas utilizing the rules of nature.

SIPO states that the invention relating to computer programs said in this Chapter refers to solutions for solving the problems of the invention which are wholly or partly based on the process of computer programs and control or process external or internal objects of a computer by the computer executing the programs according to the above mentioned process.

Only JPO allows the claim which ends with the term "program".

(i) Enablement requirement

(ii) Computer program list and computer program flowchart

JPO and KIPO partly coincide in cases where enablement requirement is not met for computer program invention as listed below:

・Where the detailed description of the invention only abstractly discloses the technical steps or functions corresponding to the claimed invention and the claimed invention cannot be worked because the detailed description of the invention fails to disclose how the steps or functions are executed or realized with a hardware or software.

・Where the detailed description of the invention simply describes a hardware or software realizing the function of the invention in claims with a functional block diagram or outline flowchart and the claimed invention cannot be worked because of the unclear description of the functional block diagram or outline flowchart on how the software and hardware are organized

・Where claims specify functions, but the detailed description of the invention describes such functions with a flowchart and the claimed invention cannot be worked because of unclear correlation between the functions in claims and the flowchart of the detailed description of the invention.

SIPO states that the description of an invention application relating to computer programs shall, in addition to outlining the technical solution of the invention as a whole, illustrate the concept of design and the technical features of the computer program concerned and the mode of exploitation to produce the technical effect in a clear and complete manner. In order to outline the main technical features of the computer program clearly and completely, the principal flow chart of the computer program shall be presented in the drawings of the description. An explanation of every step of the computer program shall be made in the description in natural language based on the said flow chart in chronological order. The main technical features of the computer program shall be described in the description to such extent that a person skilled in the art can, on the basis of the flow chart presented in the description and explanation thereof, produce the computer program capable of producing the technical effect as described in the description.

(2) Chemistry

(i) Chemical Compound invention

KIPO has the definition of chemical compounds in the Examination Guideline for organic and non-organic chemical compounds and ceramics inventions.

(a) Enablement requirement

(b) Description which supports use for enablement

Three offices coincide in that more than one technically significant utility of the invention should be disclosed as for compound inventions.

Both JPO and SIPO require the description to include embodiments, in case of an invention of a product, for instance, those which specifically show how to make the product and how to use it.

In JPO and KIPO, where claims are disclosed in Markush type and the detailed description of the invention only discloses embodiments concerning parts of components out of all the components disclosed in claims, if a skilled person in the art finds based on the description of the concerned embodiment that he/she cannot easily work the invention regarding other components based on the specification and the common technical knowledge as of the filing, the examiner should notify the ground for rejection based on the ground that the invention in the claims cannot be easily worked only based on the embodiments described in the detailed description of the invention.

JPO states that if a person skilled in the art cannot understand how to make another product defined by its function or characteristic, etc. other than products of which manufacturing method is concretely stated in the detailed explanation of the invention (or those which can be made from these products taking into account the common general knowledge), the statement of the detailed explanation of the invention is violating the enablement requirement. (For example, where a person skilled in the art who intends to work the invention would have to make trials and errors, beyond the reasonably-expected extent.)

In KIPO, compound verification data is required in some cases. As for inventions of novel compounds, embodiments with specified technical means should be disclosed.

SIPO states that chemistry is an experimental science, and a number of inventions in this field need to be verified by experimentation. Where the claimed invention is a chemical product itself, the description shall describe the identification, preparation and use of the chemical product.

If a person skilled in the art is unable, on the basis of the prior art, to predict that the use and/or its technical effect stated in the invention can be carried out, the

description shall sufficiently provide qualitative or quantitative data of experimental tests for the person skilled in the art to be convinced that the technical solution of the invention enable the use to be carried out and/or the effect as expected to be achieved.

(ii) Medical invention

In JPO, the claimed invention is not treated as medical invention unless a new medicinal use which is provided based on discovering an unknown attribute of the material is specified in the claim.

In KIPO, whether an invention constitutes medical invention shall be determined based on the description of the purpose as medicine in claims, however, in some cases, the invention is treated as medical invention even when claims do not clearly disclose the purpose of the invention as medicine.

In SIPO, if medicinal use is stated in the description, the disclosure of a medical invention is required no matter whether or not the medicinal use is stated in the claim.

(a) Enablement requirement

(b) Description which supports use for enablement

JPO states that as for medical invention, normally one or more representative embodiments or working examples are necessary in order to state the detailed explanation of the invention so as to enable a person skilled in the art to work the invention, and a description of the result of the pharmacological test is usually required to support the medicinal use.

KIPO states that as for medicinal use invention, description of medical data proving that the subject matter of the invention contains the same medical effect or description detailed enough to replace such medical data shall be disclosed unless particular conditions exist such as the certain mechanism indicating the medical effects disclosed in the specification before the application filing is disclosed.

SIPO states that for a new pharmaceutical compound or pharmaceutical composition, if a person skilled in the art is unable, on the basis of the prior art, to predict that said use or action stated in the invention can be carried out, the qualitative or quantitative data of the laboratory test (including animal test) or clinical test shall be sufficiently provided. SIPO also states that the invention of a new use for a known compound requires experimental evidence in the description to validate the

new use and effects thereof; otherwise, the requirement of enablement cannot be met.

(3) Micro-biotechnology

(i) Gene technology

(a) Enablement requirement

(b) Support requirement

Three offices coincide in that manufacturing methods, identification means, and use shall be described for micro-biotechnology inventions such as inventions of a gene, a vector, protein, etc. JPO and KIPO also state that selection/extraction methods shall be specifically disclosed.

JPO and SIPO state that when it is not possible to describe a process for producing the product in the description in such a manner that a person skilled in the art can reproduce it or if the process involves the use of a biological material which is not available to (a person skilled in the art (JPO); the public(SIPO)) (before the date of filing(SIPO only)), the product shall be deposited.

SIPO states that where a gene or a protein has a special function, for example, the protein encoded by the gene or the protein has the activity of enzyme A, the gene or the protein may be defined by a combination of the terms “substitution, deletion or addition" and functions of the gene. In this case, disclosure requirement is met only if the said derived protein is exemplified in the description, for instance in the examples, and the description states the technical means used for producing the derived protein and verifying its function.

SIPO also states that where a gene has a special function, for example, the protein encoded by it has the activity of enzyme A, the gene may be defined by a combination of the terms “hybridize under stringent conditions" and functions of the gene. In this case, disclosure requirement is met only if “stringent conditions" are described in detail in the description, and the DNA molecule defined is exemplified in the description, for instance in the examples.

(c) Others

In SIPO, Where an application for patent is filed for an invention-creation the development of which relies on the use of genetic resources, the applicant shall state

that fact in the request, and fill in the specific information of the direct and original source of the genetic resources in the Registration Form for Indicating Source of Genetic Resources (hereafter referred to as registration form) prepared by the Patent Office.

The applicant's indication of the direct and original source shall be in conformity with the requirements for filling in the registration form, and gives relevant information clearly and completely.

Where the genetic resources are directly obtained from a certain institution, such as depository institution, seed bank (germ plasm bank), gene library etc., if the institution knows and can provide the original source, the applicant shall provide the information of the original source of the genetic resources. Where the applicant fails to indicate the original source, he shall state the reasons thereof, and provide relevant evidence if necessary, for example, state "the seed bank does not make a record of the original source of the genetic resources", or "the seed bank can not provide the original source of the genetic resources", and provide relevant written certificate issued by the seed bank. (Guidelines Part II Chapter 10, Section 9. 5. 2)

When examining according to Article 26.5 and Rule 26.2, the examiner shall, at first, read the description and claims carefully to understand the invention-creation accurately. On this basis, the examiner shall determine whether the development of the invention-creation relies on the genetic resources, as well as on which genetic resources the invention-creation relies.

For invention-creation developed relying on the genetic resources, the examiner shall examine whether the applicant has submitted the registration form. If the applicant fails to submit any registration form, the examiner shall notify him in the Office Action to make a supplementary submission, and also specify which genetic resources shall be indicated regarding its source and explain the reasons thereof.

If the registration forms submitted by the applicant only indicate sources of part of the genetic resources, the examiner shall notify him in the Office Action to additionally submit the registration form(s) for the other genetic resources, and also specify the genetic resources the source of which shall be additionally indicated and explain the reasons thereof.

If the applicant has submitted the registration form, the examiner shall examine whether the direct and original source of the genetic resources are indicated in the registration form. Where no original source is indicated, the examiner shall examine whether the reason thereof is stated. If the registration form completed by the

applicant is not in conformity with the relevant provisions, the examiner shall point out the defects existing in the registration form in the Office Action. Where the patent application is still not in conformity with the provision of Article 26.5 after the applicant has made observations or amendments, the examiner shall reject it.
It should be noted that the contents in the registration form do not belong to the disclosure contained in the initial description and claims. Therefore, it can neither be used as the basis to judge whether the description has sufficiently disclosed the claimed invention, nor as the basis to amend the description and claims. (Guidelines Part II Chapter 10, Section 9.5.3)

(ii) Deposits of microorganism

JPO and SIPO state that where an invention for which a patent is applied for concerns a new biological material which is not available to the public and which cannot be described in the application in such a manner as to enable the invention to be carried out by a person skilled in the art, the applicant shall deposit the biological material with a certain depositary institute.

KIPO states that when an invention cannot be easily worked only based on the content of the specification, in order for a person with ordinary knowledge in the technology to which the invention pertains to easily work the invention based on the content of the specification, a means of securing the starting material and a manufacturing process of the end product shall be disclosed in detail in the specification, and the workability of the invention can be supported by depositing micro-organisms which are starting materials or end products.

In JPO and KIPO, document such as certificate of the deposit shall be appended to the application. If a new deposit number is issued after a patent application is filed to the micro-organism deposited, a patent application or a patentee shall report it, without delay, to the Commissioner of (the Patent Office(JPO);the Korean Intellectual Property Office(KIPO)).

In SIPO, document such as certificate of the deposit can be submitted within four months from the date of filing at the latest.

7. Others

(1) Examiners' office actions

Three offices coincide in that if the examiner can reasonably doubt that the invention does not meet the requirement of sufficient disclosure, he shall give an applicant an opportunity to respond before the decision to reject.

JPO states that the examiner shall explain the reason why he/she determines that the claimed invention fails to meet the requirement(s), while showing the grounds for such determination. The examiner is also required to set forth in the notice, to the extent possible, a clue for the applicant to understand the direction of an amendment that should be made in order to avoid the reasons for refusal.

KIPO states that Article 62 of Patent Act stipulates that the examiner, before the decision to reject an application, should notify an applicant of the grounds for rejection and give him/her an opportunity to submit a written argument with specifying a designated period. This provision is designed to prevent errors or mistakes by an examiner since he or she shall not be always expected to have the advanced knowledge requisite to a judgment to patentability in a claimed invention. And also it would be too harsh to reject a patent outright without giving an error correction opportunity under the First-to-File rule.

SIPO states that if the examiner can reasonably doubt that the invention does not meet the requirement of sufficient disclosure, he shall invite the applicant to make a clarification. SIPO shows some examples of the circumstances in which the technical solution described in the description is regarded as unable to be carried out due to lack of technical means to solve the technical problem in the Comparison Outline.

(2) Applicants' responses

JPO states that upon receiving a notice of reasons for refusal due to violation of Article 36(4)(i), 36(6)(i), or 36(6)(ii), the applicant may make an argument or clarification by submitting a written opinion, certificate of experimental results, and the like. JPO also states that if the disclosure requirement is not met due to the deficiency of the matters stated in the detailed explanation of the invention, the reasons for refusal cannot be overcome even when the applicant submits a certificate of experimental results after the filing to make up for such deficiency.

In JPO and KIPO, where an amendment is made within the period designated for submitting arguments on a final notice of grounds for rejection and where an amendment is made upon a request for reexamination, the scope of the amendment shall be further restricted by only allowing the reduction of scope of claims, etc. as well as the prohibition of the addition of new matter to the application.

SIPO states that as a principle, the amendment shall comply with Article 33. The amendment should be made in answer to the defects as indicated in the Office Action. If the manner of the amendment is not in conformity with Rule 51.3, the text amended is generally not acceptable. However, where the manner for making amendment dose not meet the requirement of Rule 51.3, but the contents and scope of the amendment are in conformity with the provision of Article 33, the amendment may be deemed to be made in answer to the defects as indicated in the Office Action and the application documents amended in this way may be acceptable, provided that the defects existed in the initial application documents are eliminated in the amended documents and there is prospect for the application to be granted the patent right. .

(3) Oaths / declarations to overcome rejections

All three offices do not have any provision for oaths or declarations.

(4) New matter / amendments

New matter:

Three offices coincide in that the amendment may not go beyond the matters described in the initial description, etc.

In JPO and KIPO, matters described in the initial description, etc. means not only matters explicitly described in the initial description, etc., but also matters which without any explicit description, a person skilled in the art would understand that are the same as the matters described in the specification or drawing(s) based on technical information at the time of filing the application. In other words, even if elements described in the specification or drawing(s) are not expressly described, but if a person skilled in the art clearly understands through his/her assessment on the elements in the original application, claims or drawing(s) that the matters are written, such elements shall not be new matter. On the other hand, SIPO states that if, after amendment, the information as seen by a person skilled in the art is different from those described in the initial application and such information cannot be directly or unambiguously derived from those described in the initial application, such amendment shall not he allowable.

In SIPO, if no other numerical value within the initial numerical range of a

certain technical feature is described in the initial description and claims, while novelty and inventive step are prejudiced by the contents disclosed in reference documents, or the invention cannot be carried out when said feature adopts certain parts of the initial numerical range, in view of these two situations, the applicant has to use a specific "disclaimer" to exclude said parts from the initial numerical range so that the numerical range of the claimed technical solution does not include said parts obviously as a whole, such amendment shall not be allowed because the amendment has gone beyond the scope of disclosure contained in the initial description and claims, with the exception that the applicant can prove, in accordance with the contents described in the initial application, that the invention cannot be carried out when said feature adopts the "disclaimed" numerical value, or the invention possesses novelty and involves an inventive step when said feature adopts the numerical value after the "disclaimer"..

Amendments:

Both in JPO and KIPO, where an amendment is made within the period designated for submitting arguments on a final notice of grounds for rejection and where an amendment is made upon a request for reexamination, the scope of the amendment shall be further restricted by only allowing the reduction of scope of claims, etc. as well as the prohibition of the addition of new matter to the application.

In JPO, it is prohibited to make such an amendment where inventions, of which patentability has been determined in a notice of reasons for refusal, in the claims before the amendment, and inventions amended after the notice of reasons for refusal is given do not meet the requirements of unity of invention because they do not have any same or corresponding special technical features.

SIPO states the amendment should be made in accordance with Rule 51.3. If the manner of the amendment is not in conformity with Rule 51.3, the text amended is generally not acceptable. However, where the manner for making amendment dose not meet the requirement of Rule 51.3, but the contents and scope of the amendment are in conformity with the provision of Article 33, the amendment may be deemed to be made in answer to the defects as indicated in the Office Action and the application documents amended in this way may be acceptable, provided that the defects existed in the initial application documents are eliminated in the amended documents and there is prospect for the application to be granted the patent right..

(5) Specification amendments vs. file wrapper documents

JPO states that written opinions and reports of experiment results submitted in response to the notice of reasons for refusal cannot substitute for the detailed explanation of the invention in the description, but if the applicant argue and prove thereby that the matters disclosed in the description or drawings as originally filed are correct and proper, the examiner should take into consideration of these particulars.

JPO also states that the examiner can request the applicant for submission of documents and other articles required for the examination.

In SIPO, when the examiner finds any reference documents which are even more related to the claimed subject matter of the invention than the prior art cited in the initial description by the applicant, the applicant shall be allowed to amend such part of the description by adding the contents of these documents and citing the document. However, it is only allowable when the amendment relate just to the background art other than the invention per se, and the contents added are prior art already known to the public before the date of filing.

SIPO states that amendment by the part of "Contents of Invention" which relates to the advantageous effects of the invention is allowable only when the technical feature(s) is clearly described in the initial application documents, but its advantageous effect is not mentioned clearly, and it can be deduced directly and unambiguously by a person skilled in the art from the initial documents. The useful effects which cannot be directly derived from the initial application by a person skilled in the art are not allowed to add.

SIPO states that amendment by the best mode for carrying out the invention or embodiment is generally limited to the addition of the source of the specific contents of the initial mode or embodiment and the standard measuring method of the described data reflecting the advantageous effects of the invention.

SIPO states that it is not allowed that the experimental data is added to illustrate the advantageous effects of the invention, and/or the specific mode for carrying out the invention or embodiment is added to prove that the invention can be carried out in the extent of protection claimed in the claims.

(6) Disclosure requirements for prior art documents

Three offices coincides in requiring an applicant to disclose information on prior art literature, if possible.

In JPO, the amendments for adding information on prior art documents to the detailed description of the invention and an amendment adding the content of documents to the column of [Background Art] in the detailed description of the invention do not fall under the addition of new matter. However, the amendments to cancel the deficiencies under enablement requirement, with addition of information on evaluation of the invention fall under the addition of new matters, which are not approved.(Examination Guidelines Part I Chapter 3 Section 3.3(1))

SIPO also has a similar statement in its guideline, according to which, adding and citing the contents of the documents which have been referred to by the examiner is allowed.

KIPO states that even though only information on prior art literature is disclosed without the detailed description of background art, if the concerned prior art literature discloses proper background art relating to the invention, the background art of the invention shall be deemed to be disclosed.

(7) Disclosure requirements for priority documents

In JPO, the claimed invention of the application in Japan shall be within the scope of the matters disclosed in the whole filing documents of the first application in order for the priority claim to be deemed valid. Determination of whether within the scope or not is done according to that of new matters.

KIPO states that where a priority claim under the Treaty is legitimate, the same invention as the invention described in the initial application shall retain the same filing date as the filing date of the initial application. Any invention excluded in the initial application shall not take the same filing date as the filing date of the initial application even if the priority claim for the invention is valid.

SIPO states that the technical solution defined in the claims of the subsequent application filed in China may enjoy the right of priority of the first foreign application so long as it has been described in that foreign application. It is not necessary for said

technical solution to be contained in the claims of that first foreign application.

All three offices coincide in that matters disclosed only in the priority documents is not considered as a basis of determining whether the requirement for patentability is met or not.

(8) Disclosure requirements for internal priority documents

In all three offices, disclosure requirements for internal priority documents for enjoying the right of internal priority is the same as that of priority under Paris Convention.

(9) Prohibited matters or inadmissible elements (e.g. superfluous elements, reference to the spirit or essence of the invention, violation of public order, morality or public health, trademarks)

(i) Violation of public order, morality or public health

All three offices prohibit such matters although SIPO does not make specific reference to public health. JPO states that such matters are not published in the Patent Gazette.

(ii) Trademarks

JPO states that where a claim includes a statement to define a product by means of a trademark, such a statement is deemed as making unclear the claimed invention unless it is clear to a person skilled in the art that the product had been maintained a certain quality, composition and structure, etc., at least for a certain period of time to the filing date.

KIPO states that in principle, stating the trademark or name of a product is not allowed in a specification. However, even though the trademark or name of a product is disclosed, where the concerned product can be easily secured; the change in quality or composition of the product with the trademark and name is less likely to change the content of the invention, stating the trademark or name of the product shall be exceptionally allowed.

SIPO states that the title of the invention shall not contain name of person, name of place, trademark, model, name of goods, or the like, nor shall it contain

commercial advertising. The description shall avoid defining a substance or product by use of a registered trademark.

(iii) Others

SIPO states that the description of the invention shall use standard terms and be in clear wording, and shall not contain such references to the claims as: "as described in claim …", nor shall it contain commercial advertising. No commercial advertising shall be used in describing the technical problem that the invention aims to solve. The expression of the claims shall be concise. Except for the technical features, a claim shall neither to the cause or reason, nor shall it contain unnecessary explanations as commercial advertising.