# Trial Decision

# Invalidation No. 2012-800076

Tokyo, Japan Demandant	JKSUCRALOSEINC.
Tokyo, Japan Patent Attorney	INABA, Yoshiyuki
Tokyo, Japan Patent Attorney	KOBAYASHI, Ayako
Tokyo, Japan Patent Attorney	AKAHORI, Ryugo
Tokyo, Japan Patent Attorney	SAITO, Naohiko
Tokyo, Japan Attorney	OGASAWARA,Koji
Tokyo, Japan Attorney	MATSUNO,Masaru
Tokyo, Japan Attorney	KATAKURA,Shuji
Tokyo, Japan Patent Attorney	TANAKA, Tomonori
Tokyo, Japan Attorney	TAMURA,Akari
Tokyo, Japan Attorney	YAMASAKI,Tomonari
Osaka, Japan Demandee	SAN-EI GEN F.F.I. INC.
Osaka, Japan Patent Attorney	Saegusa and Partners.
Osaka, Japan Patent Attorney	TANAKA,Chihiro

Osaka, Japan Patent Attorney

MIZOUCHI, Shinjiro

Tokyo, Japan Attorney

KOBAYASHI, Yukio

Tokyo, Japan Attorney

SAKATA, Yoichi

Against the Trial Decision dated May 16, 2013 on the case for trial for patent invalidation of Japanese Patent No. 3938968 "a method for masking astringency" between the parties above, the decision of revocation of the trial decision (2013 (Gyo-Ke) 10172, rendition of decision on March 26, 2014) was made by the Intellectual Property High Court, further examination has been conducted, and a Trial Decision has been made as follows.

## Conclusion

The correction shall be approved.

The patent on the invention according to Claim 1 of the Patent No. 3938968 shall be invalidated.

The costs in connection with the trial shall be borne by the Demandee.

#### Reasons

I. History of the procedures

1 The application on the invention (hereinafter, referred to as "Present Patent Invention") according to Claim 1 of the Patent No. 3938968 was filed on March 17, 1997, and the patent right on the invention was established on April 6, 2007.

2 Against this, the Demandant, JK Sucralose Japan, submitted a demand for trial dated May 10, 2012, which demanded a trial decision that "Patent No. 3938968 shall be invalidated. The costs for the trial shall be borne by the Demandee." together with Evidences A Nos. 1 to 7. The Demandant alleges that the patent invention is patented in breach of Article 29(2) of the Patent Act and fails to satisfy the requirement prescribed in Article 36(4) and (6)(i) of the Patent Act, and the Patent falls under Article 123(1)(ii) and (iv) of the Patent Act and should be invalidated.

3 The Demandee, San-Ei Gen F.F.I., Inc., submitted a written correction request (hereinafter, referred to as "First Written Correction Request"; and corrections made by this written correction request are collectively referred to as "First Correction Request") and a written reply (hereinafter, referred to as "First Written Reply") dated July 30, 2012 and demanded a trial decision that "the demand for trial is groundless and the costs for the trial shall be borne by the Demandant," and asserted that the reasons for invalidation alleged by the Demandant are groundless.

4 The Demandant submitted a written refutation (hereinafter, referred to as "First Written Refutation) dated September 6, 2012, and alleged that the First Correction

Request should not be approved since it does not conform to the requirement under the proviso to Article 134-2(1) (iii) of the Patent Act and does not conform to the provisions of Article 126 (3) to (5) of the Patent Act, which are applied mutatis mutandis pursuant to Article 134-2(5) of the Patent Act; and

even if it is approved, the patent invention after the corrections should be invalidated since it fails to satisfy the requirement prescribed in Article 36 (6) (ii) of the Patent Act, and also it does not conform to the provision of Article 36(4) and (6)(i) and Article 29(2) of the Patent Act, which are mentioned as the original reasons for invalidation.

5 The amendment on the statement of the demand was approved through the decision of acceptance or non-acceptance of amendment on September 13, 2012, and an invitation to reply was issued. In response to this, the Demandee submitted a written reply (hereinafter, referred to also as "Second Written Reply") dated October 18, 2012. 6 The Demandee submitted an oral proceedings statement brief dated February 15, 2013 and the Demandant submitted an oral proceedings statement brief dated February 15, 2013.

7 An oral proceeding was conducted at the Japan Patent Office on March 1, 2013, and it was notified that the trial examination would be made by documentary proceeding. Thereafter, a conclusion of the trial examination was notified on April 18, 2013, and the Demandant submitted a written statement dated May 10, 2013.

8 Then, the trial decision (hereinafter, referred to as "First Trial Decision") that "the correction shall be approved as requested; the demand for trial of the case was groundless; and the costs in connection with the trial shall be borne by the Demandant." was made on May 16, 2013. The Demandant filed an action for revocation of the trial decision on June 21, 2013, and the action was examined at the Intellectual Property High Court as 2013 (Gyo-Ke) 10172. As a result, a decision of revocation of the trial decision (hereinafter, referred to as "Decision of Revocation") was rendered on March 26, 2014.

9 Thereafter, the Demandee filed a petition for acceptance of final appeal against the decision of revocation of the trial decision (2013 (Gyo-Ke) 10172 by the Intellectual Property High Court), but the decision that the petition for acceptance of final appeal shall not be received was made on July 11, 2014.

10 The Demandee filed a petition for correction request on July 17, 2014; a designated period for correction request was notified on July 31, 2014; and a written correction request dated August 14, 2014 (hereinafter, this written correction request is referred to as the "Second Written Correction Request," and the correction request made by this written correction request is referred to as the "Second Correction Request") was submitted by the Demandee.

11 The Demandant submitted a written refutation (hereinafter, referred to as the "Second Written Refutation") dated October 6, 2014.

12 On November 20, 2014, a preliminary notice of decision that "the correction shall be

approved; the Patent for the invention according to Claim 1 of the Patent No. 3938968 should be invalidated; and the costs in connection with the trial shall be borne by the Demandee" was made.

13 The Demandant submitted a written correction request dated January 26, 2015 (hereinafter, this written correction request is referred to as the "Present Written Correction Request," and the correction request made by this written correction request is referred to as the "Present Correction Request").

14 Against this, the Demandant submitted a written refutation dated March 5, 2015 (hereinafter, referred to as the "Third Written Refutation").

In the decision of acceptance or non-acceptance of amendment 5, addition of a reason for invalidation under Article 36(6)(ii) of the Patent Act was approved, since it was caused by the correction "sucralose in such an amount that ranges from 0.0012 to 0.003% by weight relative to the beverage and does not exhibit sweetness" through the First Correction Request.

Further, the First Correction Request and the Second Correction Request are deemed to be withdrawn under the provision of Article 134-2(6) of the Patent Act by filing the Second Correction Request and the Present Correction Request, respectively.

#### II Contents of Correction Request

1 Matters of correction

The Present Correction Request corrects the present patent specification (hereinafter, referred to as "Specification before Correction") in line with the corrected specification (hereinafter, referred to as "Specification after Correction") attached to the Written Correction Request submitted on January 26, 2015, and includes the following Corrections 1 to 6.

## (1-1) Correction 1

In the scope of the claim for patent in the Specification before Correction, "[Claim 1] A method for masking astringency, comprising using, in an astringencyexhibiting beverage selected from tea, black tea, and coffee, sucralose in an amount of 0.0012 to 0.003% by weight relative to the beverage" is corrected to "[Claim 1] A method for masking astringency, comprising using, in an astringencyexhibiting beverage selected from <u>oolong tea</u>, green tea, black tea, and coffee, sucralose in an amount that <u>is in a range for not exhibiting sweetness and</u> is of 0.0012 to 0.003% by weight relative to the beverage."

# (1-2) Correction 2

In paragraph [0008] in Specification before Correction, "As a result, they have found that a high intensity sweetener unexpectedly decreases or softens excessive astringency in an amount not greater than a threshold for sweetness and further it does not cause any damage on a general taste." is corrected to "As a result, they have found that <u>sucralose</u> unexpectedly decreases or softens excessive astringency in an amount not greater than a threshold for sweetness and further it does not cause any damage on a general taste."

## (1-3) Correction 3

In paragraph [0009] in the Specification before Correction, after the description "This invention provides a method for masking astringency, which is characterized by using sucralose in an amount that is not greater than a sweetness threshold and is 1/100 or more of the sweetness threshold in an astringency-exhibiting product," the following description is inserted.

"Specifically, the present invention is a method for masking astringency, which is characterized by using, in an astringency-exhibiting beverage selected from oolong tea, green tea, black tea, and coffee, sucralose in an amount that is in a range for not exhibiting sweetness and is of 0.0012 to 0.003% by weight relative to the beverage."

#### (1-4) Correction 4

In the description "... 0.0014 parts of sucralose or 0.0035 parts of aspartame were filled with water up to 100 parts in total" in paragraph [0019] in the Specification before Correction, the phrase "or 0.0035 parts of aspartame" is deleted.

#### (1-5) Correction 5

In the description "... 0.003 parts of sucralose or 0.01 parts of SK sweet Z-3) (enzyme-treated stevia manufactured by Nippon Paper Industries Co., Ltd.) were filled with water up to 100 parts in total" in paragraph [0020] in the Specification before Correction, the phrase "or 0.01 parts of SK sweet Z-3) (enzyme-treated stevia manufactured by Nippon Paper Industries Co., Ltd.)" is deleted.

#### (1-6) Correction 6

In the description "0.0016 parts of sucralose or 0.005 parts of SK sweet Z-3 (enzyme-treated stevia manufactured by Nippon Paper Industries Co., Ltd.) were filled with water up to 100 parts in total" in paragraph [0021] of the Specification before Correction, the phrase "or 0.005 parts of SK sweet Z-3 (enzyme-treated stevia manufactured by Nippon Paper Industries Co., Ltd.)" is deleted.

In "3. Correction (3-6) Correction 6" in the reason for request in Present Written Correction Request, it is recognized that:

"0.0016 parts of sucralose or 0.005 parts of SK sweet Z-3) (enzyme-treated stevia manufactured by Nippon Paper Industries Co., Ltd.) were filled with water up to 100 parts in total" is an error for "0.0016 parts of sucralose or 0.005 parts of SK sweet Z-3 (enzyme-treated stevia manufactured by Nippon Paper Industries Co., Ltd.) were filled with water up to 100 parts in total"; and

"or 0.005 parts of SK sweet Z-3) (enzyme-treated stevia manufactured by Nippon Paper Industries Co., Ltd.)" is an error for "or 0.005 parts of SK sweet Z-3 (enzyme-treated stevia manufactured by Nippon Paper Industries Co., Ltd.)."

# III Suitability of Correction

1 Regarding Correction 1

Correction 1 relates to "tea" and it is for limiting the kind thereof to "oolong tea and green tea"; and is also for correcting the amount of sucralose to be added to the beverage from "0.0012 to 0.003% by weight relative to the beverage" to "an amount that is in a range for not exhibiting sweetness and is of 0.0012 to 0.003% by weight relative to the beverage" and it is intended for restriction of the range of the component ratio.

"An amount that is in a range for not exhibiting sweetness and" after the

correction is based on

the description "a high intensity sweetener unexpectedly decreases or softens excessive astringency in an amount not greater than a threshold for sweetness" in paragraph [0008] of the Specification before Correction (publication of examined patent application);

the description "This invention provides a method for masking astringency, which is characterized by using sucralose in an amount that is not greater than a sweetness threshold and is 1/100 or more of the sweetness threshold in an astringency-exhibiting product" in paragraph [0009];

the description "the amount not greater than the sweetness threshold in the present application needs only be an amount that does not exhibit sweetness" in paragraph [0013];

the description "A method for using one or more kinds of high intensity sweeteners in an astringency-exhibiting product is not particularly limited as long as it is a method whereby the high intensity sweetener is uniformly added in an amount not greater than the threshold for sweetness (in the case of a mixture of two or more kinds, the total amount thereof is not greater than the threshold) to the astringency-exhibiting product" in paragraph [0014]; and

the description "various sweeteners ... at an amount not greater than the threshold" in paragraph [0017].

Then, simply specifying "0.0012 to 0.003% by weight relative to the beverage" may include a case where that an amount is outside the range for not exhibiting sweetness. As described above, from the beginning, the application has been intended for addition of sucralose for astringency-masking in an amount not greater than the threshold for sweetness; that is, use of sucralose in an amount that is in a range for not exhibiting sweetness. Considering the intention, the range of "0.0012 to 0.003% by weight relative to the beverage" is restricted by specifying "an amount that is in a range for not exhibiting sweetness and."

In view of the above, Correction 1 aims at restriction of the scope of the claim.

Then, this Correction 1 is made within the scope of the matters disclosed in the Specification attached to the application of the patent, and it is also obvious that Correction 1 does not substantially enlarge or alter the scope of the claim.

## 2 Regarding Correction 2

Correction 2 restricts "high intensity sweetener" to a specific example, "sucralose," and it is considered that this correction aims to clarify an ambiguous statement, which is not always consistent with the invention using sucralose specified in the Claim.

Then, Correction 2 is made within the scope of the matters disclosed in the Specification attached to the application of the patent, and it is also obvious that Correction 2 does not substantially enlarge or alter the Claim.

## 3 Regarding Correction 3

Correction 3 is for making the description of the Specification before Correction consistent with the description of the scope of the claim, and it adds the explanation on the invention specified in the Claim and it is intended for clarifying an ambiguous statement.

Then, Correction 3 is made within the scope of the matters disclosed in the Specification attached to the application of the patent, and it is also obvious that Correction 3 does not substantially enlarge or alter the Claim.

### 4 Regarding Corrections 4 to 6

Corrections 4 to 6 aim to delete the statements on "aspartame" and "SK sweet Z-3 (enzyme-treated stevia manufactured by Nippon Paper Industries Co., Ltd.)," which are alternatives to sucralose and are not relevant to Patent Invention of the present case, together with their amounts to be formulated; and this is for clarifying ambiguous statements.

Then, these Corrections 4 to 6 are made within the scope of the matters disclosed in the Specification attached to the application of the patent, and it is also obvious that Corrections 4 to 6 do not substantially enlarge or alter the Claim.

#### 5 Summary

Accordingly, the corrections aim at matters prescribed in Patent Act Article 134-2(1) proviso No. 1 or No. 3 of the Patent Act and comply with the provisions of Article 126(5) and (6) of the Patent Act, which is applied mutatis mutandis in the provisions of Article 134(9). Therefore, the corrections shall be approved. IV Patent Invention after Correction

As described above, the corrections are approved, so the patent invention specified in Claim 1 of the scope of the claim after the corrections (hereinafter, referred to as "Corrected Patent Invention") is as follows.

"[Claim 1] A method for masking astringency, comprising using, in an astringencyexhibiting beverage selected from oolong tea, green tea, black tea, and coffee, sucralose in an amount that is in a range for not exhibiting sweetness and is of 0.0012 to 0.003% by weight relative to the beverage."

#### V Allegations and submitted evidences of the parties

## 1 Allegation of the Demandant

While demanding a trial decision that "the Patent of Patent No. 3938968 should be invalidated and the costs in connection with the trial shall be borne by the Demandee," the Demandant submits means of proof shown in the following 2 and alleges the following reasons for invalidation on the Corrected Patent Invention. Regarding the reasons for invalidation, the allegations that have been made so far are organized as follows.

1-1 Reason for Invalidation 1 (Article 123(1)(iv) of Patent Act)

The feature "an amount that is in a range for not exhibiting sweetness and is of 0.0012 to 0.003% by weight relative to the beverage" of the Corrected Patent Invention is equivalent to the feature "an amount that ranges from 0.0012 to 0.003% by weight relative to the beverage and does not exhibit sweetness," and "amount that is in a range for not exhibiting sweetness" in the former is synonymous with "an amount that does not exhibit sweetness" in the latter.

Therefore, regarding "an amount that is in a range for not exhibiting sweetness," the definition or the specific measurement method for unambiguously determining the

range is not described in the specification after corrections, and Examples do not describe at all that the concentration of sucralose is set as an amount that is in a range for not exhibiting sweetness. Thus, the description "an amount that is in a range for not exhibiting sweetness" of the Corrected Patent Invention is unclear.

Then, it is held in the Decision of Revocation that the description "an amount that does not exhibit sweetness" does not satisfy the requirement for clarity of Article 36(6)(ii) of the Patent Act, and the Decision of Revocation binds the body in the invalidation trial of the case under the provisions of Article No. 33(1) of the Administrative Case Litigation Act.

Therefore, it is obvious that Corrected Patent Invention is not clear in that it has the invention-specifying matter "an amount that is in a range for not exhibiting sweetness."

Accordingly, the Corrected Patent Invention does not satisfy the requirement of Article 36(6)(ii) of the Patent Act.

1-2 Reason for Invalidation 2 (Article 123(1)(iv) of the Patent Act)

Even the above Correction 1 does not specify extraction condition, etc., for each beverage of tea, black tea, and coffee, and thus, it is unclear what amount of sucralose should be added for astringency-masking. Then, it cannot be said that when sucralose is used in an amount of 0.0012 to 0.003% by weight for each beverage of oolong tea, green tea, black tea, and coffee, the astringency is masked in the entire range.

The Corrected Specification describes only one example for each beverage (oolong tea, green tea, coffee, and black tea), and it fails to describe that the astringency is masked even in the case of other kinds or extraction conditions when sucralose is used in the range of amount of 0.0012 to 0.003% by weight in the same manner.

Accordingly, the Corrected Patent Invention does not satisfy the requirement of Article 36(6)(i) of the Patent Act.

1-3 Reason for Invalidation 3 (Article 123(1)(iv) of the Patent Act)

It is not clear that, in all the beverages that are obtained in various conditions other than the conditions described in Examples of Corrected Specification, "0.0012 to 0.003% by weight of sucralose relative to a beverage" enables masking of excessive astringency without affecting the physical properties of a product. Regarding what amount of sucralose should be added to produce such a working effect, finding such an amount requires trial and error or complicated and sophisticated experimentation beyond the extent that is expected of a person skilled in the art even in consideration of the contents described in the Corrected Specification and the common technical knowledge as of the filing. Further, based on Reason for Invalidation 1 in the above 1-1, the Corrected Specification does not provide description such that a person skilled in the art can easily carry out the Corrected Patent Invention.

Accordingly, the Corrected Patent Invention does not satisfy the requirement of Article 36(4)(i) of the Patent Act.

Regarding Reasons for Invalidation 1 and 3, the Demandee has alleged so far that a measurement method for determining whether or not "an amount that does not exhibit sweetness" is "a method of limits." However, in the Correction Request, the Demandee alleges that the determination is definitely made by "paired comparison test" with the submission of Evidences B Nos. 25 and 26. Such an untimely submission is intentional or at least an act of gross negligence, causing a remarkable delay of the examination, and thus, the allegation and the submission of the evidences shall be rejected.

1-4 Reason for Invalidation 4 (Article 123(1)(ii) of the Patent Act)

Since the corrected Patent Invention could have been easily invented by a person skilled in the art before the filing of the application based on the inventions disclosed in Evidences A Nos. 1 to 7, it should not be patented under the provision of Article 29(2) of the Patent Act.

2 Then, as means of proof, the following Evidences A Nos. 1 to 17 were submitted.

Evidences A Nos. 1 to 7 were attached to the written demand for invalidation trial; Evidences A Nos. 8 and 9 were attached to the written refutation dated September 6, 2012; Evidences A Nos. 10 and 11 were attached to the oral proceedings statement brief dated February 15, 2013; Evidences A Nos. 12 to 16 were attached to the written refutation dated October 6, 2014; and Evidence A No. 17 was attached to the written refutation dated March 5, 2015.

## Note

Evidence A No. 1: "Monthly Magazine, A Technical Journal on Food Chemistry & Chemicals 10", Food Chemicals Newspaper Inc., October 1, 1985, cover page, pages 40 to 47, 127

Evidence A No. 2: Japanese Unexamined Patent Application Publication No. H7-274829

Evidence A No. 3: Japanese Unexamined Patent Application Publication No. H4-23965

Evidence A No. 4: Japanese Unexamined Patent Application Publication No. H3-251160

Evidence A No. 5: Japanese Unexamined Patent Application Publication No. S58-162260

Evidence A No. 6: US Patent No. 4915969 and partial translations thereof

Evidence A No. 7: Japanese Unexamined Patent Application Publication No. H2-177870

Evidence A No. 8: Beverage Japan, No. 215, pages 43 to 45 (1999, No. 11)

Evidence A No. 9: Can. J. Physiol. Pharmacol., Vol. 72, pages 435 to 439 (1994), and partial translations thereof

Evidence A No. 10: Japanese Journal of Food Chemistry, Vol. 2(2), 1995, pages 110 to 114

Evidence A No. 11: Test report on sensory evaluation by Japan Food Research Laboratories, December 20, 2012

Evidence A No. 12: Japanese Unexamined Patent Application Publication No. H8-214847

Evidence A No. 13: Japanese Unexamined Patent Application Publication No. H3-127960

Evidence A No. 14: "Food Science ", K.K. Shokuhin to Kagaku Sha, April 10, 1984, cover page, backbone, pages 97 to 101

Evidence A No. 15: Hiroaki KOISO, et al., "Sensory Characteristics of Sucralose and Comparison with Other High-Intensity Sweeteners", Japanese Journal of Food

Chemistry, Vol. 2(2), 1995, pages 110 to 114

Evidence A No. 16: Court decision of a request to revoke the trial decision, 2012 (Gyo-Ke) 10057 by the Intellectual Property High Court Evidence A No. 17: Japanese Unexamined Patent Application Publication No. 2008-

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## 3 Allegation of the Demandee

While demanding a trial decision that "the demand for trial of the case is groundless, and the costs in connection with the trial shall be borne by the Demandant," Demandee submits means of proof shown in the following 4 and alleges that no reasons for invalidation are found in the Corrected Patent Invention. The allegations that have been made so far are organized as follows.

### 3-1 Against Reason for Invalidation 1 (Article 123(1)(iv) of Patent Act)

Whether or not sucralose exhibits sweetness is determined through analysis and evaluation by sensory test. The amount of sucralose that does not exhibit sweetness signifies that the amount of sucralose is an amount not greater than the sweetness threshold. The sweetness threshold of sucralose is determined by "a method of limits," A threshold measurement method such as "a method of limits" is a method for etc. determining a boundary value at a concentration not higher than that at which a stimulus such as sweetness is not sensed while at a concentration not lower than that at which the stimulus is sensed. In the case that various sweeteners described in Test Example 1 of Corrected Specification are used in an amount not higher than the threshold, the threshold measurement method is a necessary method for determining a use amount thereof. However, it is not a necessary method in evaluating the presence or absence of sweetness, or simply whether or not sweetness is exhibited. Further, the judgment on whether or not sweetness is exhibited is made by paired comparison test as a sensory test wherein

several expert panelists taste two samples: a beverage added with a predetermined amount of sucralose and a beverage with no addition of sucralose and they select and evaluate which is sweeter.

Further, sensory test is to evaluate quality characteristics of a product by not a physicochemical method but a sensory psychological method by use of human sense organs. It is not explicitly described in the Present Patent Specification, but it is a commonly-used test method since the time of filing. Thus, a person skilled in the art can easily understand it based on the common technical knowledge as of the filing.

Accordingly, the Corrected Patent Invention is clear and satisfies the provision of Article 36(6)(ii) of the Patent Act, and Reason for Invalidation 1 is not found therein.

3-2 Against Reason for Invalidation 2 (Article 123(1)(iv) of the Patent Act)

The use of sucralose in "an amount that is in a range for not exhibiting sweetness" for masking astringency is described in paragraphs [0008], [0009], [0014], [0015], and [0017] of the Corrected Specification. The Corrected Patent Invention is an invention wherein sucralose is used in an amount not greater than the sweetness threshold or "an amount that is in a range for not exhibiting sweetness" to thereby reduce or soften excessive astringency of oolong tea or the like and further not to damage a general taste.

Test Example 1 explicitly describes that the amount of sucralose that does not

exhibit sweetness reduces or softens the astringency derived from tannin; that is, the astringency of tea, black tea, or coffee.

Example 1 describes that sucralose was added so as to reach a concentration of 0.0012% by weight and this provided "oolong tea wherein astringency of tea was masked"; Example 2 describes that sucralose was added so as to reach a concentration of 0.0014% by weight and this provided "green tea wherein too strong astringency was masked"; Example 3 describes that sucralose was added so as to reach a concentration of 0.003% by weight and this provided "black tea wherein astringency was masked"; and Example 4 describes that sucralose was added so as to reach a concentration of 0.0016% by weight and this provided "coffee wherein unpleasant astringency peculiar to coffee was masked."

These Examples 1 to 4 do not explicitly describe that the added amounts of sucralose were an amount that does not exhibit sweetness in each beverage. However, paragraph [0008] of the Corrected Specification states "they have found that sucralose unexpectedly decreases or softens excessive astringency in an amount not greater than a threshold for sweetness and further it does not cause any damage on a general taste, thereby completing the present invention"; and likewise, paragraph [0014] states "A method for using one or more kinds of high intensity sweeteners in an astringencyexhibiting product is not particularly limited as long as it is a method whereby the high intensity sweetener is uniformly added to the astringency-exhibiting product in an amount not greater than the threshold for sweetness (in the case of a mixture of two or more kinds, the total amount thereof is not greater than the threshold)." Thus, considering the entire Corrected Specification, the Corrected Patent Invention is understood as an invention having as a major premise the feature wherein sucralose is used in an amount that does not exhibit sweetness and the astringency of a beverage is reduced or softened (masked). Therefore, since Examples 1 to 4 confirm the astringency-masking effect of sucralose for oolong tea, green tea, black tea, and coffee, they are naturally understood as an example wherein sucralose is used in an amount that does not exhibit sweetness. This is also confirmed in the supplementary tests of Evidence B No. 14, which supplementarily tested these Examples.

Then, using sucralose in an amount that is in a range for not exhibiting sweetness and is of 0.0012 to 0.003% by weight excludes a case wherein sucralose is used in an amount that exhibits sweetness and affecting the physical properties of a product; and the Corrected Patent Invention produces an effect to solve the problem; that is, "to reduce or soften excessive astringency without affecting the physical properties of a product."

Therefore, since Corrected Patent Invention is within the scope described in the detailed description of the invention of Corrected Specification, it satisfies the requirement prescribed in Article 36(6)(i) of the Patent Act.

Further, the preliminary notice of decision indicated that "it cannot be said that when sucralose is used in an amount of 0.0012 to 0.003% by weight relative to each beverage of tea, black tea, and coffee, the astringency is masked in the entire range of the amount." Against this indication, when the scope of the claim is compared to the scope described in the detailed description of the invention, it is sufficient to judge whether or not the former scope exceeds the latter scope by a necessary and appropriate interpretation method. The detailed description of the invention of the Corrected Specification does not need to describe that when sucralose is used in an amount of 0.0012 to 0.003% by weight relative to each beverage, the astringency is masked in the entire range of the amount with the evidence therefor. Based on the description of Examples 1 to 4 as specific examples, a person skilled in the art can formally understand that when sucralose is used in "an amount that is in a range for not exhibiting sweetness and is of 0.0012 to 0.003% by weight" for an astringency-exhibiting beverage (oolong tea, green tea, black tea, or coffee), the astringency of the beverage is reduced or softened (masked).

Accordingly, the Corrected Patent Invention of the case satisfies the provision of Article 36(6)(i) of the Patent Act, and Reason for Invalidation 2 is not found therein.

3-3 Against Reason for Invalidation 3 (Article 123(1)(iv) of the Patent Act)

The Corrected Patent Invention is achieved merely by adding sucralose that satisfies the condition wherein "an amount of sucralose that is in a range for not exhibiting sweetness" and "is of 0.0012 to 0.003% by weight" for "an astringency-exhibiting beverage selected from oolong tea, green tea, black tea, and coffee," and the form for carrying out the invention is quite clear and simple.

Specifically, sucralose is added in a range of "0.0012 to 0.003% by weight" to a beverage of interest, and it is sufficient to judge whether the addition of sucralose "produces sweetness or not" (that is "exhibit sweetness or not") and "whether or not astringency is reduced."

The judgment on "whether or not sweetness is produced" (that is, "whether or not sweetness is exhibited") and "whether or not astringency is reduced" can be made by paired comparison test, which is a discrimination test for sensory evaluation method that had already been established in the art before the filing of the application. In the paired comparison test, at the time when the difference in sweetness cannot be identified between "sucralose-added region" and "non-added region," "the magnitude of stimulus that becomes a boundary between whether or not the presence of a stimulus or the difference between two stimuli can be identified" is referred to as "threshold" (Evidence B No. 7). Thus, the added amount of sucralose at that time can be concluded as being at least not greater than the threshold; that is, "amount that does not exhibit sweetness."

In this way, "whether or not sweetness is produced" (that is, "whether or not sweetness is exhibited") and "whether or not astringency is reduced" can be definitely determined by a sensory evaluation method established in the art by adding sucralose in an amount of 0.0012 to 0.003% by weight to an astringency-exhibiting beverage selected from oolong tea, green tea, black tea, and coffee.

Accordingly, the description of the detailed description of the invention in the Corrected Specification is described in a clear and sufficient manner that a person skilled in the art can carry out Corrected Patent Invention without requiring special trial and error or complicated and sophisticated experimentation and it satisfies the provision of Article 36(4)(i) of the Patent Act, and Reason for Invalidation 3 is not found therein. 3-4 Against Reason for Invalidation 4 (Article 123(1)(ii) of the Patent Act)

Evidence A No. 1 describes that a high intensity sweetener "thaumatin," which is a protein with a molecular weight of 22000, has an effect to soften unpleasant astringency; it masks and reduces astringency of tannin especially derived from black tea and has an effect to enhance an aroma of black tea (Evidence A No. 1, page 43, the bottom line of the left column to line 9 of the right column).

Further, Evidence A No. 1 describes that after drinking of a thaumatin solution with a concentration thereof not higher than a sweetness threshold (0.0001%), when a solution of tannic acid (0.02%) as an astringent substance derived from black tea was taken, the astringency was sensed by half and softened (Evidence A No. 1, page 43, the right column "5. Masking of bitterness, saltiness, acidity, and astringency"). However, the effect indicated therein is produced when thaumatin and the astringency substance do not coexist in an aqueous solution. It does not describe that the astringency of black tea can be masked in a state where thaumatin is allowed to exist in an amount not greater than the sweetness threshold together with a black tea beverage; that is, when thaumatin is added in an amount that does not exhibit sweetness.

In view of the above, Evidence A No. 1 describes that an amount of thaumatin that exhibits sweetness has an effect of masking astringency of black tea derived tannin, while it does not indicate that astringency of black tea can be masked in a state where thaumatin is allow to exist at a ratio not greater than the sweetness threshold in a black tea beverage; that is, thaumatin is added in an amount that is in a range for not exhibiting sweetness.

Further, Evidence A No. 1 fails to indicate that thaumatin has a masking effect on the astringency derived from oolong tea or the astringency derived from coffee.

Then, Evidences A Nos. 2 to 5 disclose that "a sugar alcohol," "glycyrrhetic acid monoglucuronide," "a stevia extract," and "a decomposition product of aspartame," respectively, have an effect to reduce astringency, while they do not describe or suggest that "sucralose" has an effect of masking astringency of oolong tea, green tea, black tea, and coffee.

Evidence A No. 2 relates to the reduction of astringency by a sugar alcohol and not the reduction of astringency by a high intensity sweetener such as sucralose or thaumatin. Evidence A No. 3 relates to astringency-masking and merely describes that use of "glycyrrhetic acid monoglucuronide" in an amount that exhibits sweetness enables masking of the astringency of citrus. Evidence A No. 4 describes that undesirable aftertaste such as bitter taste, harsh taste, or astringent taste is reduced based on inorganic electrolyte cation, and it is completely different from Corrected Patent Invention in the astringency to be masked. Evidence A No. 5 discloses "a decomposition product of aspartame," which is not essentially sweet and is not used as a sweetener.

Further, Evidence A No. 6 goes no further than describing a method for imparting sweetness to coffee or black tea by "sucralose" and it does not describe or suggest that "sucralose" has an effect of masking astringency of tea, black tea, and coffee.

Furthermore, Evidence A No. 7 describes that "sucralose" has an effect to mask astringency or an unpleasant off-note of a flavoring agent. However, the object to be masked of Evidence A No. 7 is "bitter taste" of a flavoring agent and this is irrelevant to tea, black tea, and coffee, which are objects of Patent Invention of the case; and in this regard, Evidence A No. 7 discloses an effect different from the effect of "sucralose."

Therefore, even considering Evidences A Nos. 2 to 7, there is no motivation to use "sucralose" in "an amount that is in a range for not exhibiting sweetness and is of 0.0012 to 0.003% by weight relative to the beverage" instead of "thaumatin" disclosed in Evidence A No. 1 with the purpose of masking "astringency" for "an astringency-

exhibiting beverage selected from oolong tea, green tea, black tea, and coffee."

Further, masking astringency of oolong tea, green tea, black tea, and coffee by a small amount of sweetener not greater than a sweetness threshold was not common technical knowledge at the time of filing the patent application of the case. Thus, regarding "astringency-exhibiting beverage selected from oolong tea, green tea, black tea, and coffee," even when Evidences A Nos. 2 to 7 are taken into consideration with the purpose of masking "astringency" and they are combined, no motivation is present in using "sucralose" in "an amount that is in a range for not exhibiting sweetness and is of 0.0012 to 0.003% by weight relative to the beverage" instead of "thaumatin" disclosed in Evidence A No. 1.

4 Then, as means of proof, Evidences B Nos. 1 to 4 and Evidences B Nos. 6 to 24 were submitted.

Please note that Evidence B No. 5 was deleted (see the oral proceedings record). Then, Evidences B Nos. 1 to 4 and 6 were attached to the first written reply; Evidences B Nos. 7 to 13 (Annexed sheets 1 to 9 were attached to Evidence B No. 12) were attached to the second written reply; Evidences B Nos. 14 to 21 were attached to the oral proceedings statement brief dated February 15, 2013; Evidences B Nos. 22 to 24 were attached to the written statement dated March 21, 2013; and Evidences B Nos. 25 and 26 were attached to the written correction request dated January 26, 2015.

### Note

Evidence B No. 1: "Beverage Glossary" edited by Japan Soft Drink Association and one other, Beverage Japan, Inc., June 25, 1999, cover page, reference page 11, imprint Evidence B No. 2: "New Edition: Food Chemistry Glossary" edited by Susumu OKAMOTO, Kabushiki Kaisha Kenpakusha, March 1, 1996, (new edition ,3rd issue), cover page, pages 48 to 51, 76 to 77, 102 to 103, 152 to 153, and 230 to 231, and imprint

Evidence B No. 3: "Foodstuff Illustration Dictionary", Shogakukan Inc., March 1, 1996, First edition, 10th issue, cover page, a part of a table of contents, pages 252 to 257, imprint

Evidence B No. 4: "JIS Sensory Evaluation Analysis - Vocabulary JIS Z 8144:2004", Deliberation of Japanese Industrial Standards Committee, Japan Standards Association, revised March 20, 2004, cover page, pages 20 to 21, imprint

Evidence B No. 6: "Proceedings of the Research Society of Japan Sugar Refineries' Technologists", Research Society of Japan Sugar Refineries' Technologists, edited by Research Laboratory of Japan Sugar Refiners' Association, No. 26, July 1, 1976, cover page, pages 7 to 17, imprint

Evidence B No. 7: "JIS Sensory Evaluation Terms, JIS Z 8144-1990", Deliberation of Japanese Industrial Standards Committee, Japan Standards Association, established March 1, 1990, cover page, pages 2 to 4, 6, 13 to 15, 19 and imprint

Evidence B No. 8: Muneyuki NAKAGAWA, "The Relationship between Astringency and the Reaction Aspects of Astringents for Protein", Journal of Japanese Society for Food Science and Technology, Vol. 19, No. 11, November 1972, pages 531 to 537 Evidence B No. 9: Shiro Ohashi, et al., "Effects of thaumatin, a natural sweetener, on improvement of flavor", New Food Industry, Vol. 27, No. 3, 1985, cover page, pages 33 to 39, imprint

Evidence B No. 10: "Kagaku Sosetsu (Elements of chemistry) No. 14, Chemistry on

taste and smell", edited by The Chemical Society of Japan, published by Japan Scientific Societies Press, February 10, 1985, 5th issue, cover page, pages 100 to 101, imprint

Evidence B No. 11: "Experiment Report" prepared by Koji YOSHINAKA, employee of the Demandee, dated October 11, 2012

Evidence B No. 12: Written statement "The sweet substances known at the time in 1997" dated October 15, 2012, prepared by Koji YOSHINAKA, employee of the Demandee

Attached Document 1: Table of research results on sweet substances known at the time in 1997

Attached Document 2: Kagaku Sosetsu (Elements of chemistry) No. 14, Chemistry on taste and smell, edited by The Chemical Society of Japan, published by Japan Scientific Societies Press, February 10, 1985, 5th issue, cover page, pages 85 to 95, 100 to 119, 122 to 125, and imprint

Attached Document 3: Monthly Magazine "A Technical Journal on Food Chemistry & Chemicals", May 1985, Vol. 1, No. 1, published by Food Chemicals Newspaper Inc., cover page, pages 50 to 53, and 115

Attached Document 4: Monthly Magazine " A Technical Journal on Food Chemistry & Chemicals ",October 1985, Vol. 1, No. 6, published by Food Chemicals Newspaper Inc., cover page, pages 10 to 13, 22 to 23, 26 to 27, 32 to 39, 76 to 79, 92 to 93, and 127 Attached Document 5: "Genealogy of sweet and the science thereof", Kabushiki Kaisha Korin, published June 20, 1986, cover page, pages 84 to 85, 92 to 93, 100 to 101, 290 to 291, 296 to 297, 302 to 303, and imprint

Attached Document 6: Separate Volume " A Technical Journal on Food Chemistry & Chemicals 4, Directory of Sweeteners", Food Chemicals Newspaper Inc., published December 20, 1990, cover page, pages 4 to 5, 14 to 15, 88 to 89, 106 to 107, 130 to 131, 138 to 139, 142, 143, 150 to 151, 212 to 215, 218 to 219, 253 to 257, 280 to 281, and 296

Attached Document 7: Kikan Kagaku Sosetsu (Quarterly Magazine, Elements of Chemistry), No. 40, 1999, "Molecular recognition on taste and smell", edited by The Chemical Society of Japan, Japan Scientific Societies Press, 1st edition, February 25, 1999, pages 22 to 25, 30 to 57, 60 to 63, 68 to 69, and imprint

Attached Document 8: Official Journal of the European Communities, 19. 2. 97, "DIRECTIVE 96/83/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL" No L 48/16 to 48/19

Attached Document 9: National Publication of International Patent Application No. H8-503206

Evidence B No. 13: Response (report) by Akira HASEGAWA at Representative Office in Japan of Tate & Lyle dated March 19, 2012 to inquiry of San-Ei Gen F.F.I., Inc. on "The global usage state of sucralose at the time in 1997"

Evidence B No. 14: "Experiment Report 3" prepared by Koji YOSHINAKA, employee of the Demandee, dated February 14, 2013

Evidence B No. 15: "New Edition: Sensory Evaluation Handbook", edited by Sensory Test Committee of Union of Japanese Scientists and Engineers, JUSE Press, Ltd. published March 7, 1995, cover page, pages 398 to 403, and imprint Evidence B No. 16: Noriko KOBAYASHI, et al., "New Sweetener, Aspartame", Research Society of Japan Sugar Refineries' Technologists, No. 26, 1997, pages 7 to 17 Evidence B No. 17: "Statistical Method of Sake Tasting (XII) Psychophysical Method (1)" Shin SATO, magazine of Brewing Society of Japan, Vol. 52 (1957), No. 5, pages 361 to 357, material for explaining the year of publication (web)

Evidence B No. 18: "Sensory Evaluation Analysis - Method JIS Z 9080:2004",

Deliberation of Japanese Industrial Standards Committee, Japan Standards Association, March 20, 2004, cover page, pages 6, 11 to 12, 22 and imprint

Evidence B No. 19: "Experiment Report 4" prepared by Koji YOSHINAKA, employee of the Demandee, dated February 14, 2013

Evidence B No. 20: "New Edition: Sensory Evaluation Handbook", edited by Sensory Test Committee of Union of Japanese Scientists and Engineers, JUSE Press, Ltd. published March 7, 1995, cover page, pages 301 to 306, 845, and imprint

Evidence B No. 21: cover page of Official Journal of European Parliament (Official Journal of the European Communities), Volume 40 (February 19, 1997)

Evidence B No. 22: Comparison table between raw material extracts used in Examples 1 to 4; and raw material extracts used in Experiment Report 3 (Evidence B No. 14)

Evidence B No. 23: "Basics for Statistics learned through color imaging", Nikkyoken Co., Ltd. 1st edition 1st issue published October 16, 2006, cover page, pages 6 to 8, and imprint

Evidence B No. 24: "Starter's Book for Understanding Statistics", Gijutsu-Hyohron Co., Ltd., 1st edition 9th issue published on July 1, 2012, cover page, pages 54 to 61, and imprint

Evidence B No. 25: "New Edition: Sensory Evaluation Handbook", edited by Sensory Test Committee of Union of Japanese Scientists and Engineers, JUSE Press, Ltd. published March 7, 1995, cover page, pages 249 to 252, 829, and imprint

Evidence B No. 26: Tsunehiko NINOMIYA, "Sosetsu (general remarks) - Sensory Test on Foods", Journal of Japanese Society for Food Science and Technology, Vol. 16, No. 8, August 1969, pages 372 to 379

VI. Judgment of the body on reasons for invalidation

<Regarding Reason for Invalidation 1>

1 It is obvious that the invention-specifying matter of Corrected Patent Invention "using sucralose in an amount that is in a range for not exhibiting sweetness and is of 0.0012 to 0.003% by weight relative to the beverage" signifies substantially the same contents as the invention-specifying matter "using sucralose in such an amount that ranges from 0.0012 to 0.003% by weight relative to the beverage and does not exhibit sweetness" in Claim 1 in the scope of the claim corrected through First Correction Request.

2 Then, a suit against First Trial Decision that approved the First Correction Request was filed; and regarding Reason for Invalidation 1 indicated in the above V, 1, 1-1, the decision of revocation of Case No. 2013 (Gyo-Ke) 10172 by the Intellectual Property High Court (rendition of decision on March 26, 2014) ruled as follows.

"Considering that sensory inspection is made by human senses and thus, it is highly probable that the threshold differs depending on the measurement method or the like, the range of sucralose amount of 0.0012 to 0.003% by weight described in the

scope of the claim has upper and lower limit values and the upper limit value is 2.5 times greater than the lower limit value. Then, the variation range (variation) of the sweetness threshold is so large that it is not negligible and it is found that it is unclear what range of amount is signified by 'amount not greater than the sweetness threshold' or 'amount that does not exhibit sweetness' in relation with 0.0012 to 0.003% by weight. Thus, eventually, the 'amount that does not exhibit sweetness' does not satisfy the requirement for clarity prescribed in Article 36(6)(ii) of the Patent Act."

The above decision binds the body in the present case on the trial for patent invalidation under the provision of Article No. 33(1) of the Administrative Case Litigation Act.

3 Therefore, in the invention-specifying matter of Corrected Patent Invention "using sucralose in an amount that is in a range for not exhibiting sweetness and is of 0.0012 to 0.003% by weight relative to the beverage," it is found that it is unclear what range of amount is signified by the "amount that is in a range for not exhibiting sweetness" in relation with 0.0012 to 0.003% by weight. Thus, the "amount that is in a range for not exhibiting sweetness" does not satisfy the requirement for clarity prescribed in Article 36(6)(ii) of the Patent Act.

## VII. Closing

As described above, the Patent was granted in breach of the provision of Article 36(6)(ii) of the Patent Act; and thus, it falls under the provision of Article 123(1)(iv) of the Patent Act and should be invalidated without examining other Reasons for Invalidation.

The costs in connection with the trial shall be borne by the Demandee under the provisions of Article 61 of the Code of Civil Procedure, which is applied mutatis mutandis in the provisions of Article 169(2) of the Patent Act.

Therefore, the trial decision shall be made as described in the conclusion.

May 8, 2015

Chief administrative judge: TORII, Minoru Administrative judge: YAMAZAKI, Katsushi Administrative judge: SASAKI, Seisho