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Datasheet for the decision of 21 March 2025

Case Number: T 0959/23 - 3.3.09

Application Number: 17732559.4

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IPC: A23G4/06, A23G4/10

Language of the proceedings: EN

Title of invention:
CHEWING GUM WITH STEVIA

Patent Proprietor:
Perfetti Van Melle S.p.A.

Opponents:
Mondelez International, Inc.
Wm. Wrigley Jr. Company

Headword:
Chewing gums with Stevia/PERFETTI

Relevant legal provisions:
EPC Art. 56
RPBA 2020 Art. 12(4), 13(1)

Keyword:
Auxiliary request: Inventive Step - (no)

Decisions cited:

Catchword:

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Beschwerdekammern

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Case Number: T 0959/23 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 21 March 2025

Former Appellant: (Former Opponent 1)	Mondelez International, Inc. 905 West Fulton Street, Suite 200 Chicago, IL 60607 (US)
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Appellant: (Opponent 2)	Wm. Wrigley Jr. Company 1132 W Blackhawk Street Chicago, IL 60642 (US)
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Respondent: (Patent Proprietor)	Perfetti Van Melle S.p.A. Via XXV Aprile, 7 20020 Lainate (Milano) (IT)
Representative:	Bianchetti & Minoja with Trevisan & Cuonzo IPS SRL Via Plinio, 63 20129 Milano (IT)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 2 May 2023 concerning maintenance of the European Patent No. 3451849 in amended form.**

Composition of the Board:

Chairman	A. Haderlein
Members:	A. Veronese
	P. Guntz

Summary of Facts and Submissions

I. The decision concerns the appeal filed by opponent 2 (appellant) against the opposition division's decision finding that European patent No. EP 3 451 849 as amended according to the main request, originally filed as auxiliary request 1 on 30 December 2022, meets the requirements of the EPC.

II. Opponent 1 also filed an appeal against the decision. However, it has since withdrawn both the appeal and the opposition with its letter dated 2 October 2023.

III. With their notices of opposition, the opponents had requested revocation of the patent on the basis of, *inter alia*, Article 100(a) (lack of inventive step).

IV. Claim 1 of the request found allowable by the opposition division reads as follows.

"*1. A chewing gum comprising Stevia in percentages of at least 0.05% by weight on the total of the gum, calcium carbonate and butyl rubber as high viscosity elastomer, wherein:*
(i) the butyl rubber has a Mooney viscosity of 51 ± 5 units, as measurable by the ASTM D1646 method, and an unsaturation percentage ranging from 1% to 3%, and
(ii) the calcium carbonate to high viscosity elastomer(s) weight ratio ranges from 2:1 to 13.5:1."

V. The documents submitted during the opposition proceedings included:

D1: WO 91/03147

D2: "Arlanxeo X_Butyl® RB 101-3", product data sheet, 1 August 2014

D5: D. Fritz, "Formulation and Production of Chewing and Bubble Gum", Kennedy's Books Ltd, 2008, pages 98 to 100, 104, 105, 108 and 183

D5a: Further excerpts from D5, page 116

D7: WO 2005/011397 A1

D8: US 5,552,163

D11: US 5,437,876

D13: Submissions and experimental tests filed by the respondent by letter dated 25 August 2022

D14: H. Limei, "Snack Food Recipe and Manufacturing", Chinalight Industry Press Ltd., 2000, pages 379 and 380 (original CN version)

D14a: English translation of D14

D15: "Lanxess Butyl 101-3", product data sheet, 12 July 2007

D16: Experimental report filed by the appellant by letter dated 27 September 2022

D18: Experimental report filed by the respondent by letter dated 29 September 2022

D22: Declaration by Mr Brass filed with the appellant's letter of 31 January 2023

D23: Letter filed by the respondent, dated 30 December 2022, describing tests on chewing gums

D32: Experimental report filed by the appellant by letter dated 26 July 2022

VI. In its decision, the opposition division found, *inter-alia,* that:

- The claimed subject-matter involved an inventive step over D1, the closest prior art. No conclusion could be drawn from the results of the experimental reports filed during the opposition proceedings. The claimed chewing gum was a non-obvious alternative to the chewing gums disclosed in D1. Neither D1 nor the other cited prior-art documents, D5, D7, D8 and D11, provided an incentive to provide the claimed chewing gum. The same conclusion applied starting from D14 as the closest prior art.

VII. With its reply to the appellant's statement setting out the grounds of appeal, the respondent filed a main request and an auxiliary request. During the oral proceedings held before the board, the respondent withdrew its main request. Claim 1 of the request formerly designated the auxiliary request, now the sole remaining request, reads as follows.

"*1. A chewing gum comprising Stevia in percentages of at least 0.05% by weight on the total of the gum, one calcium salt which is calcium carbonate and one high viscosity elastomer which is butyl rubber, wherein: (i) the butyl rubber has a Mooney viscosity of 51 ± 5 units, as measurable by the ASTM D1646 method, and an unsaturation percentage ranging from 1% to 3%, and (ii) the calcium carbonate to high viscosity elastomer weight ratio ranges from 2:1 to 13.5:1.*"

VIII. With its statement setting out the grounds of appeal, the appellant filed:

D19: Declaration by Mr D. Fritz

IX. With its reply to the statement setting out the grounds of appeal, the respondent filed:

D20: "Butyl Rubber BK-1675P", product data sheet, 2012

X. With its letter dated 28 June 2024, the respondent filed:

D24: Submission and experimental evidence filed by the respondent by letter dated 28 June 2024

XI. The appellant's arguments, where relevant to the decision, can be summarised as follows.

- The test report D24, filed with the reply to the statement of grounds of appeal, should not be admitted.

- The claimed chewing gum did not involve an inventive step over D1, the closest prior art. It differed from that of D1 in the rubber type and in the calcium to elastomer ratio. The distinguishing features were not associated with any new effect. The appellant's sensory tests described in D16 and D32 showed that the purported effect was not achieved. These tests were more significant than those of the respondent in D13.

- The problem was to provide an alternative chewing gum containing Stevia. The use of the claimed butyl rubber and calcium carbonate, in the claimed ratio, in chewing gums, was obvious in view of D2, D5, D15 and D11, for example.

XII. The respondent's arguments, where relevant to the decision, can be summarised as follows.

- The claimed chewing gum involved an inventive step over D1, the closest prior art, for the following reasons.

  - Examples 17 to 20 of D1 were comparative examples, which were not in accordance with the invention of D1. Moreover, they were hypothetical and insufficiently disclosed. Thus, they were not suitable starting points.
  - The distinguishing features, i.e. the type of rubber, its viscosity and the calcium to elastomer ratio, together contributed to the effect shown in D13, D18 and D24.
  - The problem was not simply the provision of an alternative chewing gum.
  - The cited prior art did not provide an incentive to combine the features of claim 1.
  - None of the cited prior-art documents provided hints at the claimed chewing gum, and, in particular, D5 did not relate to chewing gums comprising Stevia; D20 described butyl rubbers having different Mooney viscosities; and most of the documents did not disclose Stevia and/or the claimed calcium carbonate to elastomer ratio.

Requests

XIII. The appellant requested that the decision under appeal be set aside and that the patent be revoked.

XIV. The respondent requested that the patent be maintained on the basis of the sole remaining request, which had

originally been submitted as the auxiliary request with the respondent's reply to the statement setting out the grounds of appeal.

Reasons for the Decision

Auxiliary request (sole remaining request on file)

1. *Inventive step*

The invention and the closest prior art

1.1 The opposed patent relates to a chewing gum comprising Stevia as a sweetening agent. It teaches that Stevia may have a plasticising effect on the gum base and that its incorporation may result in excessive softening of the chewing gum, which then becomes unpleasant to chew. Furthermore, it teaches that chewing gums comprising high-viscosity elastomers - e.g. butyl rubber - and calcium salts are not subject to the plasticising effect induced by Stevia and do not suffer from the associated drawbacks (see paragraphs [0016] to [0019] and [0028]).

1.2 The opposition division decided that D1 constitutes the closest prior art, and the parties did not contest this. D1 discloses chewing gums comprising Stevia as a sweetener. The opposition division and the appellant used Examples 17 to 20 of this document as the starting point for assessing inventive step.

1.3 The respondent argued that Examples 17 to 20 were only comparative examples, because they did not relate to the gist of the invention described in D1. D1 focused on chewing gums in which Stevia was encapsulated,

agglomerated or absorbed onto porous material and was released slowly. The chewing gums of Examples 17 to 20 were not of this type. Moreover, they were only hypothetical, because the elastomeric component was defined by a generic reference to a "synthetic rubber", without any information on the chemical nature and viscosity of this rubber.

1.4 These arguments are not convincing. As submitted by the appellant, the Stevia included in the chewing gums of Examples 17 to 20 is formulated in gum bases made of a polyterpene resin, a polyvinyl acetate or paraffin wax (see page 22, lines 15 to 21). Hence, it can be considered "absorbed or entrapped with low water soluble materials", as recited by the last paragraph of page 4 of D1. This means that these examples are in accordance with the invention of D1. As noted by the respondent itself during the oral proceedings, only the chewing gums of Examples 68 to 73, described on pages 35 and 36 of D1, can be considered comparative because, as stated on the last paragraph of page 36, they did "not give a delayed release action".

1.5 Furthermore, regardless of whether Examples 17 to 20 are comparative or in accordance with the invention, they are a suitable starting point for assessing inventive step because they describe chewing gums comprising Stevia as a sweetener, an elastomer and calcium carbonate.

1.6 The fact that D1, when describing the preparation of the gum base refers in a generic way in the last paragraph on page 21 to a "synthetic rubber" does not mean that the skilled person would not be able to prepare chewing gums according to the invention disclosed in D1, as argued by the respondent. Examples

of elastomers which can be used to prepare the chewing gums, e.g. poly-isobutylene and isobutylene-isopropene copolymer and styrene butadiene, are mentioned in the third paragraph on page 16 of D1. Other suitable compounds are mentioned on page 22, lines 15 to 22, relating specifically to Examples 17 to 20.

1.7 It is also worth noting that the only chewing gum exemplified in the opposed patent is described even more generically than the chewing gums of D1: the ingredients are in fact defined by a mere reference to "butyl rubber", a "low-viscosity elastomer", "resins", "emulsifiers" and "plasticisers" (see the table in paragraph [0029] of the opposed patent).

1.8 For these reasons, Examples 17 to 20 of D1 are suitable starting points for assessing inventive step, as decided by the opposition division.

Distinguishing technical features

1.9 As held by the opposition division, the claimed chewing gum differs from the chewing gums described in Examples 17 to 20 of D1 on account of:

- the type of synthetic rubber, this being a butyl rubber having the viscosity and unsaturation degree specified in claim 1

- the ratio of calcium carbonate to butyl rubber

Technical effect

1.10 The opposed patent states that when butyl rubber and a calcium salt are used in the claimed ratio to prepare the gum base, the plasticising effect induced by Stevia

which renders a chewing gum unpleasant to chew can be prevented. However, the patent does not provide any evidence of this effect.

1.11 During the opposition proceedings, the parties filed several experimental reports. Relying on these reports, the respondent tried to demonstrate, and the appellant to confute, that the use of Stevia in chewing gums induces a plasticising effect and a deterioration of chewing properties, and that these effects can be prevented using the composition according to the invention.

1.12 Taking into account the parties' submissions, the opposition division decided that there was no evidence that the claimed effect could be achieved using the claimed chewing gum.

1.13 The respondent contested the opposition division's finding. To support its arguments, it relied on the tests and the technical considerations set out in the following experimental reports.

Experimental report D13

1.14 D13 is an experimental report filed by the respondent during the opposition proceedings. It shows that the inclusion of Stevia in a chewing gum according to the invention comprising butyl rubber and calcium carbonate in the claimed ratio decreases the G* complex modulus of the chewing gum only slightly. Moreover, it demonstrates that Stevia substantially decreases the G* complex modulus of chewing gums comprising a medium molecular weight polyisobutylene instead of butyl rubber. According to the respondent, these different effects on the G* complex modulus - a parameter which

reflects the elastic and plastic deformation of a material - indicate that the claimed compound combination prevents the negative effects induced by Stevia in chewing gums.

1.15 D13 describes, in addition, sensorial tests performed by six expert chewers who masticated chewing gums for four minutes. The results show that the inclusion of Stevia in chewing gums comprising butyl rubber and calcium carbonate, in the claimed ratio, does not substantially change the chew profile. Conversely, they show that Stevia causes a significant drop in elasticity and an increased softness and hydration in chewing gums comprising polyisobutylene instead of butyl rubber.

Experimental test D18

During the oral proceedings before the board, the respondent referred to D18. D18 is an experimental report comparing the effects of the inclusion of Stevia in a chewing gum according to the invention and in a comparative one corresponding to the disclosure of D14. The tests performed, on a rheometer, are meant to mimic the hardness on the first bite. Additional tests were performed on a panel of trained chewers. According to the conclusions, the chewing gum of the invention has a more stable texture and less of a decrease in hardness and elasticity compared to the comparative one, which quickly loses its structure and tends to melt.

Experimental tests in D23

D23 was filed by the respondent during the opposition proceedings. It describes tests on chewing gums containing Stevia. According to the respondent, D23

showed that the experimental setting used by the appellant to conduct the tests described in D16 was not suitable for determining the effect of Stevia in chewing gums.

Experimental report D24

D24 was filed by the respondent during the appeal proceedings, by letter dated 28 June 2024. It describes additional tests and sets out further technical considerations aimed at confirming the technical effects observed using the claimed chewing gums. Furthermore, it aims at showing that the experimental setting used to conduct the experiments in D16 was unsuitable for determining the effect of adding Stevia to a chewing gum.

1.16 The appellant disputed that the aforementioned tests were suitable for showing the purported technical effect. Furthermore, it requested that D24 not be admitted into the appeal proceedings.

1.17 The board concurs with the appellant that D24 should not be admitted. The new tests and the technical considerations set out in D24 address the inconsistency between the results observed in the respondent's tests of D13 and in the appellant's tests of D16.

1.18 However, the discrepancy between the results of these tests was already addressed by the parties during the opposition proceedings (see the respondent's submissions dated 30 December 2022 (D23), the appellant's letter dated 31 January 2023 and the annexed Bras declaration (D22)). Consequently, the new tests and the technical considerations set out in D24, which address the aforementioned inconsistency between

the parties' results, should have been filed during the opposition proceedings, or at least in the reply to the appellant's statement setting out the grounds of appeal. In Annex I of that statement, the appellant commented on the inconsistency between the parties' results. However, the comments are only based on results and submissions presented earlier during the opposition proceedings. No new evidence is presented in Annex I.

1.19 Furthermore, several prior-art documents concerning the suitability of an oscillatory rheometer to conduct the tests, and the impact of different heating rates on the results, are cited in D24 for the first time.

1.20 In addition, D24 describes new experimental tests. Thus, it sets forth new facts and raises new issues which should have been raised during the opposition proceedings, or at least at the earliest possible stage of the appeal proceedings. For these reasons, D24 is not admitted into the appeal proceedings (Article 12(4) and 13(1) RPBA).

1.21 According to the patent, since Stevia has plasticising properties on the gum base, chewing gum comprising Stevia becomes unpleasant to chew and can even flake or disintegrate during chewing (see paragraph [0016]). The patent teaches that the deterioration of chewing properties induced by Stevia can be prevented by formulating a chewing gum as defined in claim 1.

1.22 Thus, preventing the deterioration of chewing properties is the technical effect that the invention aims to achieve.

1.23 Due to the complexity of the chewing process, the ultimate evidence that this effect is in fact achieved is obtained by carrying out sensory tests, in real conditions, when the chewing gum is chewed by a person. As noted by the appellant, parameters such as the complex modulus G*, measured using a rheometer, are far less representative than chewing tests, because they do not reproduce the conditions found in the mouth during mastication. These involve the presence of saliva, dissolution of water-soluble ingredients and shear forces that substantially exceed those applied when rheology tests are carried out.

1.24 All of the sensory tests conducted by the appellant in real conditions, in panels of trained chewers, show that there was no statistical difference in chewing properties when Stevia was included in chewing gums according to the invention comprising butyl rubber, or in comparative chewing gums comprising other polymer elastomers (see the results of the appellant's tests described in D16 and those annexed to the appellant's letter dated 26 July 2022; hereinafter referred to as D32).

1.25 The results of the tests in D16 and in D32 contradict those of the respondent shown in D13 and in D18.

1.26 However, as noted by the appellant, the tests described in D16 were conducted using a more rigorous sensory panel and statistical analysis compared to those used to carry out the respondent's tests in D13. Furthermore, two different elastomers, in addition to butyl rubber, were tested in the tests of D16. Hence, there is no reason to cast doubt on the results in D16. The discrepancy between the results could be due to the less rigorous sensory panel and/or the statistical

analysis of the results in D13. Alternatively, as submitted by the appellant, the discrepancy could simply be due to differences in the specific compounds present in the chewing gums used to conduct the tests. D13 refers generically to "resins", "plasticisers", "emulsifiers", a "Butyl Rubber" and a "Medium Molecular Weight polyisobutylene", without any indication as to which compounds were actually used. The Mooney viscosity and the saturation degree of the tested elastomers is not indicated either. Hence, the discrepancy between the results in D13 and those in D16 can be explained by the use of different compounds in the tested chewing-gums.

1.27 It is noted that on page 12 of its reply to the statement of grounds of appeal, the respondent conceded that "classes of ingredients", rather than specific compounds, were mentioned in D13, and that different ingredients were actually used for the tests. It further stated that "in all cases the results of the tests have confirmed that the type of polymers, as well as the calcium carbonate to polymer ratio are determinant for the plasticizer effect...". Thus, it is impossible to know which compounds were actually used to carry out the tests.

1.28 Concerning D18, as noted by the appellant during the oral proceedings, the composition of the chewing gum according to the invention used for the tests differs so much from that used as a comparison that the results do not make it credible that the observed effects are induced by the butyl rubber-calcium carbonate combination present in the gum base. The compositions also differ, in fact, in the type and amount of plasticisers and emulsifiers, and in the amounts of calcium carbonate and elastomers.

1.29 For these reasons, the board considers that the sensory tests in D16 and D32 provide evidence that the addition of Stevia to chewing gums does not always induce a softening effect. Although softening might occur in certain chewing gums (e.g. in those of D13) and can be prevented by preparing chewing gums according to the invention, it is not credible that Stevia induces softening and that this softening can be prevented in any type of chewing gum. This means that it is not credible that the relevant effect can be obtained across the entire scope claimed.

1.30 The respondent relied heavily on the results of tests assessing the rheological properties of chewing gums. In particular, it relied on the tests measuring the G* complex modulus with a rheometer, which are shown in D13.

1.31 However, the results of these tests are contradicted by those shown by the appellant in D16. The parties discussed at length the reasons behind the contradicting results, and whether the experimental setting used in their respective tests was suitable for demonstrating the purported effect.

1.32 The respondent argued, in particular, that the application of a strain equal to 3% when operating the rheometer used by the appellant was not appropriate for obtaining significant results. Thus, in its opinion, the results in D16 were not relevant.

1.33 This argument is not convincing because, as submitted by the appellant, the discrepancy in the results can be more easily ascribed to a compositional difference in the tested chewing gums. As already mentioned above,

D13 does not identify the specific ingredients contained in the tested chewing gums.

1.34 Moreover, as already discussed above, the rheological properties of a chewing gum do not necessarily reflect what is experienced when the chewing gum is chewed in the mouth. Hence, the tests obtained using a rheometer carry less weight than the sensory tests carried out by the experienced chewers.

1.35 Finally, as noted by the appellant during the oral proceedings, the opposed patent does not even mention the G* modulus, let alone the specific experimental settings used for the determination thereof in the tests of D13. The board agrees with the appellant that there could be different parameters and methods for measuring the rheological properties of the chewing gums, and that there is no evidence that the choice of the G* complex modulus and the experimental setting selected by the respondent for the determination thereof are best suited to mimic the properties of a chewing gum during the chewing process.

1.36 For these reasons, the board is not convinced that the technical features distinguishing the claimed invention from the prior art induce the alleged technical effect. Furthermore, it is not convinced that the underlying problem is solved across the entire scope claimed.

Underlying technical problem

1.37 In view of the aforementioned considerations, the underlying technical problem is, as suggested by the appellant and as held by the opposition division (see page 9, last paragraph, of the decision under appeal),

the provision of an alternative chewing gum comprising Stevia.

Obviousness of the claimed solution

1.38 The question at issue is whether, starting from Examples 17 to 20 of D1 and confronted with the underlying technical problem, the skilled person would have prepared a chewing gum comprising:

- a butyl rubber having the claimed viscosity and unsaturation percentage

- the claimed ratio of calcium carbonate to butyl rubber

1.39 The board considers that this question is to be answered in the affirmative, for the following reasons.

1.40 As argued by the appellant, the choice of a butyl rubber having the claimed viscosity and unsaturation percentage would have been obvious to the skilled person.

1.41 As shown on page 32 of D1, the chewing gums of Examples 17 to 20 were prepared using a "typical base formula" comprising as the elastomer component a "synthetic rubber". The third paragraph on page 16 refers to elastomers including an "isobutylene-isoprene copolymer", i.e. a butyl rubber. Furthermore, D5, D2 and D15 show that butyl rubbers having the claimed Mooney viscosity and unsaturation percentage were known before the relevant date and were already being used to prepare the gum base of chewing gums.

1.42 D5, a book focusing on the formulation and production of chewing gums, which represents the common general knowledge before the relevant date, confirms that "isobutylene-isoprene copolymer" is an elastomer suitable for preparing the gum base of chewing gums. Furthermore, D5 teaches that, although a variety of synthetic polymers are used in the rubber industry, only a few are suitable for this purpose. Three synthetic elastomers are mentioned: (i) styrene-butadiene rubber (SBR), (ii) polyisobutylene (PIB) rubber and (iii) isobutylene-isoprene co-polymer (i.e. butyl rubber). The latter is said to have better compatibility with the most common ingredients used in gum bases. The unsaturation percentage, represented by the isoprene moieties, is in the range of 0.5 to 3%, i.e. substantially in the same range as that of claim 1 (see pages 98 and 100, points 4.6.2 and 4.6.2.3, and Figure 4.5).

1.43 The respondent argued that D5 was published at a time when Stevia was not yet an approved ingredient and that, for this reason, D5 did not qualify as common general knowledge "applicable to D1". This argument is not convincing, because the relevant issue is that D5 teaches unambiguously that butyl rubber was well known for preparing the gum base of chewing gums.

1.44 D2, a data sheet from Arlanxeo, describes the commercial butyl rubber "X_Butyl® RB 101-3", which has the claimed Mooney viscosity of 51 ± 5, and an unsaturation percentage of1.75%, which is within the claimed range. Furthermore, D2 teaches that this butyl rubber can be used to manufacture the chewing gum base.

1.45 D15, a data sheet from Lanxess, describes another commercial butyl rubber, "Lanxess Butyl 101-3", having

the claimed Mooney viscosity and unsaturation percentage. Moreover, D5 states that the rubber is non-staining and can be used to manufacture the base of chewing gums.

1.46 The respondent argued that the selection of the claimed butyl rubber would not have been obvious, because this rubber was not the only available butyl rubber suitable for gum production. For example, butyl rubbers having a Mooney viscosity falling outside the claimed range were disclosed in D19 and D20.

1.47 This argument is not convincing because the skilled person looking for a suitable alternative would have considered using any of the known available elastomers, and in particular those considered most suitable for the claimed use at the relevant time.

1.48 As argued by the appellant, the choice of the claimed 2:1 to 13.5:1 calcium carbonate to butyl rubber ratio would also have been obvious to the skilled person.

1.49 It is undisputed that D1 does not disclose a gum base comprising these ingredients within the claimed ratio. The base used to prepare the chewing gums of Examples 17 to 20 contains a 12:13 calcium carbonate to synthetic rubber ratio.

1.50 However, as noted by the appellant during the oral proceedings, D1 teaches that the amount of calcium carbonate used as a filler can be increased to about 60% of the gum base. Furthermore, it teaches that as long as the relevant high-potency sweetener (e.g. Stevia) is encapsulated, agglomerated or absorbed in the chewing gum, "the remainder of the chewing gum ingredients are noncritical to the present invention.

That is, the coated particles of high potency sweetener can be incorporated into conventional chewing gum in a conventional manner" (emphasis by the appellant). Thus, D1 does not provide any restriction as to the ingredients used, and their respective amounts, within the chewing gum composition. The skilled person would appreciate that any conventional gum base could be used and that the specific gum base in Examples 17 to 20 could be adapted or replaced by any other conventional gum base comprising ingredients and ratios known from the prior art.

1.51 D5, which represents common general knowledge in the field, describes as a "typical" gum base a composition comprising a filler (calcium carbonate) and butyl rubber in a 25:13 ratio. This ratio is just slightly outside the claimed one. Thus, when starting from D1, the skilled person would have considered a ratio which is the same as or similar to that suggested in D5, including the claimed 2:1 ratio.

1.52 A further incentive to select this ratio can be found in D11, which discloses chewing gums controlling the release of sweeteners (including Stevia), which comprise calcium carbonate and butyl rubber in the claimed ratio (see e.g. Examples 14, 15, 19, 21, 27, 36, 40, 41 and 42, as mentioned by the appellant during the oral proceedings). Stevia is mentioned as a high-intensity sweetener in column 17, line 20, of D11.

1.53 The respondent argued that other documents, and in particular D7, disclosing chewing gums having reduced adhesion to surfaces, mentioned ratios outside the claimed range. Comparative Example 10, having a calcium carbonate to elastomer ratio of less than 2, performed

badly. Thus, the skilled person would not have been prompted to select this ratio.

This argument is not convincing, however, because the effect sought in D7 - to provide chewing gums having reduced adhesion to surfaces - has no bearing on the effect underlying the claimed invention.

1.54 For these reasons, when confronted with the underlying problem the skilled person would have considered using butyl rubber and calcium carbonate in the claimed ratio, as argued by the appellant.

1.55 The opposition division held, and the respondent argued, that these documents would not have provided the skilled person with an incentive to select the claimed ratio, because they did not "focus" on this ratio. Furthermore, the opposition division held that the chewing gums disclosed in the examples of these documents did not comprise Stevia, that the Mooney viscosity of the butyl rubber was not mentioned, that other elastomers were present in some examples, and that some documents referred to a ratio which was lower than the claimed one. Thus, there was "no reason to focus on both the calcium carbonate and high viscosity elastomer and to adjust the ratio so as to fall within the ratio of 2:1 to 13.5 to 1".

1.56 These arguments are not convincing either. When confronted with the underlying problem, the skilled person would have taken into account, independently, all of the alternatives disclosed in the aforementioned prior-art documents. This means that they would have considered using the claimed butyl rubber following the teaching of D1, D5, D2 and D15, and a ratio of the calcium carbonate and butyl rubber falling within the

claimed range, following the teaching of D1, D5 and D11. The fact that the chewing gums disclosed in certain documents contain a different ratio is irrelevant, because the skilled person would have considered any possible ratio disclosed in the prior art. The fact that other elastomers were included in some chewing gums disclosed in the prior art is not relevant either, because claim 1 itself does not exclude the presence of other elastomers.

1.57 Furthermore, contrary to the respondent's submissions, D1 does not teach that Stevia interacts with the components of the gum base and that formulation problems arise when it is incorporated into conventional chewing gums. D1 addresses a different problem, namely that of regulating the release of the intensive Stevia taste and preventing its aftertaste. There is no teaching that these properties are affected by the type of elastomer used or by its ratio with a filler, e.g. calcium carbonate. Thus, D1 does not contain any teaching which would have led the skilled person away from the claimed solution. No such teaching can be found in the other cited documents either.

1.58 For these reasons, the skilled person starting from D1 and confronted with the underlying problem would have considered using the claimed butyl rubber, in the claimed ratio with calcium carbonate, when preparing a gum base. Consequently, the claimed solution does not involve an inventive step. As a consequence, the request that was formerly designated the auxiliary request, which is the sole remaining request, is not allowable (Article 56 EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

K. Götz-Wein A. Haderlein

Decision electronically authenticated