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**Datasheet for the decision
of 17 November 2010**

Case Number: T 0406/09 - 3.3.10

Application Number: 04755546.1

Publication Number: 1658044

IPC: A61K 8/73

Language of the proceedings: EN

Title of invention:

Cationic cassia derivatives and applications therefor

Patentee:

Lubrizol Advanced Materials, Inc.

Opponent:

Glycomer GmbH

Headword:

Cationic cassia derivatives/LUBRIZOL

Relevant legal provisions:

EPC Art. 54, 56, 100(b)(c), 114(2)

RPBA Art. 12(4), 13(1)(3)

Keyword:

"Late filed documents and evidence - admissibility"

"Amendments (allowable)"

"Sufficiency of disclosure (yes)"

"Novelty (yes)"

"Inventive step (no) - improvement not shown - obvious alternatives"

Decisions cited:

T 0020/81, T 1072/98, T 0681/00, T 0555/04, T 0760/05

Catchword:

-



Case Number: T 0406/09 - 3.3.10

DECISION
of the Technical Board of Appeal 3.3.10
of 17 November 2010

Appellant: Glycomer GmbH
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 9 February 2009
rejecting the opposition filed against European
patent No. 1658044 pursuant to Article 101(2)
EPC.

Composition of the Board:

Chairman: C. Komenda
Members: J.-C. Schmid
D. S. Rogers

Summary of Facts and Submissions

I. The Appellant (Opponent) lodged an appeal against the decision of the Opposition Division rejecting the opposition against European patent No. 1 658 044 pursuant to Article 101(2) EPC. Independent claim 1 of the patent as granted reads as follows:

"1. A personal care composition comprising a polygalactomannan having repeating units containing a D-mannosyl to D-galactosyl residue ratio of 5 to 1 wherein a portion of the hydrogen groups on the pendant hydroxy substituents on the mannosyl and galactosyl residues are substituted with a group represented by the formula:



wherein A is a substituted or unsubstituted alkylene group containing 1 to 6 carbon atoms, and R^1 is a group independently selected from $-N(R^3)_3^+ X^-$, $-S(R^3)_2^+ X^-$, and $-P(R^3)_3^+ X^-$, wherein R^3 independently represents substituted and unsubstituted C_1 to C_{24} alkyl, substituted and unsubstituted benzyl and substituted and unsubstituted phenyl; and X is any suitable anion that balances the charge on the onium cation, and an ingredient selected from surfactants, non-surfactant suspending agents, emulsifiers, emollients, moisturizers, hair conditioning agents, hair fixatives, film-formers, skin protectants, binders, chelating agents, disinfectants, insecticides, fungicides, deodorants, pest repellants, odoriferous materials, antimicrobial agents, antifungal agents,

antibiotics, antidandruff agents, abrasives, adhesives, absorbents, colorants, deodorants, antiperspirant agents, humectants, opacifying and pearlescing agents, antioxidants, preservatives, propellants, spreading agents, exfoliants, keratolytic agents, blood coagulants, vitamins, sunscreen agents, artificial tanning accelerators, ultraviolet light absorbers, pH adjusting agents, botanicals, hair colorants, oxidizing agents, reducing agents, skin bleaching agents, pigments, anti-inflammatory agents, topical anesthetics, fragrance and fragrance solubilizers, particulates, microabrasives, abrasives, and combinations thereof."

II. The notice of opposition filed by the Appellant cited *inter alia* document

(7) US-A-5 733 854.

III. The Opposition Division held that the subject-matter of the patent-in-suit did not extend beyond the content of the application as filed (Article 100(c) EPC). In particular, granted claim 1 was supported by the combination of original claims 1 and 8. As there was no evidence that the skilled man could not manufacture the claimed compositions, the patent-in-suit disclosed the invention in a manner sufficiently clear and complete for it to be carried out by a skilled person (Article 100(b) EPC). The claimed subject-matter was novel since none of the cited documents disclosed a personal care composition comprising a cationic polygalactomannan derivative and a further cosmetic auxiliary as required by claim 1. In particular

document (7) only disclosed polygalactomannan isolated from guar and locust bean having a mannose:galactose ratio of 2:1 and 4:1 respectively, whereas claim 1 of the patent-in-suit required a ratio of 5:1. The objective technical problem to be solved starting from the closest prior art document (7) was the provision of a personal care composition achieving better wet and dry detangling properties, in particular less polymer build up on the hair. The Respondent's test report filed on 4 June 2008 showed that the claimed compositions were solutions to this technical problem. Since there was no teaching in the available prior art that derivatized cassia, i.e. polygalactomannans with a 5:1 mannose:galactose ratio, would enhance or promote the wet and dry detangling properties of shampoo compositions or enhance the delivery and deposition of hair conditioning aids in shampoo, the subject-matter of claim 1 as granted involved an inventive step (Article 56 EPC).

IV. At the oral proceedings before the Board, held on 17 November 2010, the Respondent withdrew its auxiliary request 2. It further withdrew its conditional request for remittal to the department of the first instance should the Board of Appeal admit new documents (28) to (32) in the appeal proceedings. It defended the maintenance of the patent in suit as granted and on the basis of auxiliary request 1 whose set of claims differed from the granted only by the deletion of dependent claim 8, i.e. claim 1 of auxiliary request 1 being strictly identical to the granted claim 1 of the main request. During these oral proceedings the Appellant argued for the first time in these

appeal/opposition proceedings that the subject-matter of claim 1 lacked novelty with respect to document (24)

(24) FR-A- 2 773 990.

V. According to the Appellant, there was no basis in the application as filed for the composition of granted claim 1 which resulted from an inadmissible combination of restricted polygalactomannans with restricted further ingredients. The invention was insufficiently disclosed since the patent-in-suit failed to disclose any method for reliably determining the mannose:galactose ratio of polygalactomannans. The ratio mannose:galactose depended on the process of extraction and on the measuring method. Furthermore, the addition of polygalactomannans having high degrees of substitution in shampoos comprising surfactants would cause a precipitate thereby inhibiting any conditioning effect. The subject-matter of claim 1 lacked novelty with respect to document (7), since the disclosure of this document was not limited to guar polygalactomannan, but encompassed polygalactomannan obtained from any endosperm of leguminous seeds, in particular locust bean. A mannose:galactose ratio of 5.1:1 was found in locust bean gum. In support to its arguments the Appellant filed documents (28) to (33)

(28) US-A-6 063 402

(29) Canadian Journal of Chemistry, vol. 47,
pages 2883 to 2887, 1969,

(30) Industrial and Engineering Chemistry, vol. 41,
pages 2887 to 2890,

(31) Carbohydrate Research, vol. 71, 1979, pages 205
to 230,

(32) Advances in Carbohydrate Chemistry and Biochemistry, Volume 31, Pages 241 to 312, 1975.

The problem to be solved with respect to document (7) which represented the closest prior art consisted merely in providing alternative personal care compositions since it was not shown that the choice of a polygalactomannan with a 5:1 mannose:galactose ratio resulted in any improvement over the prior art. In support of its position it filed experimental data (document (36)). In addition the comparative test reports provided by the Respondent were not fair, since the compared polygalactomannans differed not only by their ratio mannose:galactose, but also by a different average molecular weight and/or a different degree of cationic substitution, those further structural differences having an impact on the hair conditioning. Furthermore the test report filed on 10 October 2010 being late-filed should not be admitted into the appeal proceedings. It would have been a routine variation for a skilled person to choose a further known polygalactomannan useful in the cosmetic field, such as one having a mannose:galactose ratio of 5:1 since no effect was achieved. Thus, the skilled person would have arrived at the subject-matter claimed without having to exercise any inventive skill.

VI. According to the Respondent, no new combinations were created by incorporation of the ingredients listed in claim 8 as originally filed, save water and solvents, into claim 1 since there was no requirement that all those listed ingredients must be present together. The invention was adequately described to enable a skilled person to reproduce the subject-matter of claim 1.

Standard methodologies for determining the ratio residues present in polysaccharide were known, furthermore cassia galactomannans having a mannose to galactose ratio of 5:1 were commercially available. The objection re undesirable interactions of highly substituted cationic derivatives was unfounded, moreover claim 1 was a product-claim without any reference to an effect to be achieved. Documents (28) to (33) were late filed as they were filed after the expiry of the nine month period for filing an opposition. These documents being not relevant should not be admitted into the proceedings. Nor should document (24) be admitted into the proceedings, this late filed document having already not been admitted by the Opposition Division for lack of relevance. The subject-matter of claim 1 was novel with respect to document (7), since this document did not disclose any polygalactomannan having a mannose:galactose ratio of 5:1. The technical problem to be solved in the light of document (7) which represented the closest prior art was to provide a composition having an improved hair conditioning effect. The claimed compositions characterized by polygalactomannans having a mannose:galactose ratio of 5 : 1 were solutions to this technical problem. In support to its arguments the Respondent relied on the test reports filed with the letters of 4 June 2008, 4 March 2010 (Document (39)) and 15 October 2010. The compositions comprising cationic cassia were according to the invention, since polygalactomannan obtained from cassia has a mannose:galactose ratio of 5:1, whereas those comprising cationic guar having a mannose:galactose ratio of 2:1 reflected the state of the art. It was not possible to carry out a comparison with

polygalactomannans having exactly the same average molecular weight, since polygalactomannans were biological materials obtained from natural sources. Nevertheless the average molecular weights of the compared polygalactomannans were similar. In the test report filed with the letter of 4 June 2008, a composition according to the invention comprising derivatized cassia was compared to that comprising a derivatized guar to show the enhancement effect on the wet and dry combability of human hair tresses. The cationic guar used for the comparison was optimized with respect to its degree of cationic substitution to be better than the cationic guar of the state of the art. Accordingly, since the claimed polygalactomannan was shown to be better than the optimized cationic guar used in the comparison, it would inevitably be better than the structurally closest cationic guar of the prior art. The comparative test report described in document (39) was conducted by an independent and disinterested third Party and demonstrated the beneficial effect for cationic cassia at high levels of substitution. The delay of filing the test report of 15 October 2010 was caused by a lack of the Respondent's laboratory capacity. This test report compared compositions comprising cationic cassia and guar at the same level of cationic substitution. Even if the technical problem were only the provision of an alternative cosmetic composition, the skilled person would have had no reason to choose specifically galactomannan having a ratio of 5:1, all the more because document (7) indicated that guar gum was the preferred starting material.

VII. The Appellant requested that the decision under appeal be set aside and that the patent be revoked.

The Respondent requested that the appeal be dismissed or, subsidiarily, that the decision under appeal be set aside and the patent be maintained on the basis of auxiliary request 1 filed with the letter of 4 March 2010.

VIII. At the end of the oral proceedings the decision of the Board was announced.

Reasons for the Decision

1. The appeal is admissible.

2. *Late filed evidences (Article 114(2) EPC)*

2.1 *Documents (28) to (33)*

2.1.1 Documents (28) to (33) are new evidence cited for the first time in the Appellant's Statement of the Grounds of Appeal. The Respondent objected to admitting these documents into the proceedings for the reason that they were late-filed non-relevant documents.

2.1.2 According to Article 12(4) RPBA, the Board shall take into account all facts, evidence and requests submitted by the parties with the Statement of the Grounds of Appeal and the reply to it but may hold inadmissible facts, evidence and requests which could have been presented during the first instance proceedings.

2.1.3 The submission by an Appellant of new documents in the Statement of the Grounds of Appeal is to be considered as a normal action of a losing party (see decision T 1072/98, point 2.3 of the reasons, not published in OJ EPO). The Appellant who had lost the opposition proceedings should be given the opportunity to fill the gaps in its arguments by presenting further evidence in the second instance. These new documents are concerned with the content of mannose and galactose in naturally occurring polygalactomannans. The filing of these documents was prompted by the decision of the Opposition Division to acknowledge novelty with respect to document (7) on account of the mannose:galactose ratio of the polygalactomannan in the claimed compositions. Having regard to the present factual situation, the Appellant was entitled to file those new documents with the Statement of the Grounds of Appeal in order to show that the claimed mannose:galactose ratio could not render the subject-matter of claim 1 novel over document (7).

Thus, in the present case, documents (28) to (32) filed with the Statement of the Grounds of Appeal are not filed late in the sense of Article 114(2) EPC. Hence, these documents are to be taken into consideration in these appeal proceedings.

2.2 *Document (24)*

During the oral proceedings before the Board and for the first time during the opposition/appeal proceedings the appellant requested to consider document (24) for lack of novelty. The Appellant argued that after thorough rereading of this document it thought that it

was novelty-destroying for claim 1. The relevance of this document was, however, again disputed by the Respondent which requested not to admit it into the appeal proceedings.

Document (24) was filed before the first instance on 24 October 2008, i.e. after the expiry of the opposition period, and the opposition division decided to not admit it into the proceedings for lack of relevance. Furthermore, this document had never been referred to in the appeal proceedings until during the oral proceedings before the Board.

Under these circumstances, the Board therefore exercises its discretionary power conferred by Article 114(2) EPC to disregard this document.

2.3 *Respondent's new experimental report*

2.3.1 The new comparative test report was submitted by the Respondent on 15 October 2010, i.e. more than 6 months after the filing of its reply to the Statement of the Grounds of Appeal and about one month before the oral proceedings before the Board. It is late-filed. The Appellant contested the admissibility of this new evidence in the proceedings in view of its belatedness.

2.3.2 According to Article 114 (2) EPC the EPO may disregard facts or evidence which are not submitted in due time by the Parties concerned. Thus, any amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and considered at the Board's discretion. The discretion shall be exercised in view of *inter alia* the complexity of the new subject matter

submitted, the current state of the proceedings and the need for procedural economy (Article 13 (1) RPBA). More particularly, amendments sought to be made after oral proceedings have been arranged shall not be admitted if they raise issues which the Board or the other party cannot reasonably be expected to deal with without adjournment of the oral proceedings (Article 13(3) RPBA).

According to the established jurisprudence of the Boards of appeal the relevance of the late-filed evidence is a crucial criterion for deciding on their admissibility in the proceedings, however, other criteria are important, such as how late, whether the late submission of evidence constitutes an abuse of proceedings, or if their admission excessively delays the proceedings (see T 760/05, point 1 of the reasons, T 681/00, point 2 of the reasons; T 555/04, point 1 of the reasons). Thus, the Boards of Appeal making use of their discretion under Article 114 (2) EPC in order to ensure fair and prompt proceedings are entitled to refuse to take them into account.

- 2.3.3 According to the Respondent, this late filed experimental report was filed to show that the claimed compositions compared to those of document (7) improve the conditioning of hair. However, the comparison of the compositions performed in these tests does not show the effect of the sole distinguishing characteristic and therefore does not demonstrate an improvement in hair conditioning by the claimed compositions when compared to those of document (7) (see point 6.4.3 below). Thus, these comparative tests do not seem to be pertinent for the issue of inventive step.

2.3.4 Moreover if the Respondent, in the light of the Statement of the Grounds of Appeal, was of the opinion that the evidences already on file were insufficient to support its position, it would have had to submit any new evidence, at the latest, with its reply to the Statement of the Grounds of Appeal. At the same time it would have to submit arguments as to why the Appellant reason's were not suitable for challenging the recognition of inventive step by the Opposition Division, especially in view of the Appellant's new evidence. In the present case, the sole reason given by the Respondent to justify the late filing of this experimental report was a lack of capacity of the laboratory. However, the Board does not accept this justification for the following reasons:

With letter of 22 December 2009, the Respondent requested a second two-month extension of the time limit set for replying to the Appellant's statement of ground of appeal which comprised experimental evidences, i.e. *inter alia* document (36) dealing with a combing test. The Respondent justified its request by its wish to file a complete response and that due to a lack of laboratory capacity more time was needed to evaluate and verify the Appellant's experiments. This reply came with the letter of 4 March 2010, where the Respondent commented on the Appellant's experimental evidence document (36) and provided a new experimental report (document (39)). That appeared to be the complete reply to the Appellant's grounds of appeal, since the Respondent had never announced that it intended to file more comparative data or that further experiments were ongoing. Hence, the reason of lack of laboratory

capacity given for justifying the filing of a comparative test report one month before the oral proceedings does not persuade the Board to accept this late-filed evidence. Moreover the introduction of an experimental report in the proceedings at this stage without adjourning the oral proceedings would be contrary to the principle of equal treatment of the parties and would adversely affect the Appellant.

2.3.5 Thus, the late-filed test report of 15 October 2010, which in addition lacks relevance for the decision to be taken, is not admitted into the proceedings (Article 114(2) EPC).

Main request

3. *Amendments (Article 100(c) EPC)*

Claim 1 is based on the combination of claim 1 as originally filed with claim 8 dependent thereon. Additionally the radical R^1 of the substituent of the galactomannan of claim 1 as granted is restricted to the definitions $-N(R^3)_3^+ X^-$, $-S(R^3)_2^+ X^-$, and $-P(R^3)_3^+ X^-$ by the mere deletion of the other definitions present in claim 1 as originally filed and the second component of the composition of claim 1 as granted are the ingredients listed in original claim 8 without water and solvents.

The restriction of the lists of alternative definitions disclosed in the application as filed is not objectionable as this limitation does not result in singling out a particular combination of specific definitions, i.e. a hitherto not specifically mentioned

sub-class of components. It maintains the remaining subject-matter of claim 1 as generic lists of alternative definitions differing from the original lists only by their smaller size.

Accordingly, the combination of original claims 1 and 8 forms a proper basis for claim 1 as granted. For this reason, the Board concludes that the subject-matter of claim 1 does not extend beyond the content of the application as filed such that the requirements of Article 123(2) EPC are satisfied and the ground for opposition pursuant to Article 100(c) EPC is disqualified.

4. *Insufficiency of disclosure (Article 100(b) EPC)*

The Appellant claimed that the measuring method of the mannose:galactose ratio was flawed since the patent did not specify according to which method and how the skilled person should perform the measurement of this ratio. It was the Appellant's point that, owing to this insufficient information with respect to this critical characteristic of polygalactomannans, the skilled person could not assess whether a composition falls within or outside the scope of claim 1.

With respect to sufficiency of disclosure, the relevant question is whether the patent in suit provides sufficient information which enables the skilled person when taking into account common general technical knowledge to reproduce the claimed compositions. The Appellant has however conceded that the skilled person was able to prepare polygalactomannans with the claimed mannose:galactose ratio. The Appellant's objection

rather refers to determining the limits of the subject-matter claimed. Accordingly, that objection is thus related to the question whether the claims clearly define the matter for which protection is sought, which is a matter of Article 84 EPC. The Board observes that Article 84 EPC is not a ground for opposition within the sense of Article 100 EPC, so that this Appellant's objection cannot be taken into consideration.

The second Appellant's objection concerns an alleged absence of conditioning effect of compositions comprising polygalactomannans having high degrees of cationic substitutions. However, the conditioning effect achieved by the claimed composition is an issue relating to the technical problem solved by the invention to be considered when assessing inventive step. Thus, it is not relevant for sufficiency of disclosure, as claim 1 only requires structural characteristics relating to the composition without specifying any effect to be achieved. Thus, the Appellant's second objection must also be rejected.

Consequently, the Appellant's challenge to the sufficiency of the disclosure of the patent in suit under Article 100(b) EPC fails.

5. *Novelty (Article 54 EPC)*

- 5.1.1 Document (7) discloses a detergent composition useful *inter alia* for cleaning and/or conditioning human hair comprising a cationically derivatized polygalactomannan wherein the cationic substituents are of the formula $R_1R_2R_3R_4N^+ X^-$ wherein R_1 is a monohydroxylated or polyhydroxylated alkyl group containing between one and

about six carbon atoms; R_2 and R_3 are independently, alkyl groups containing between one and six carbon atoms; R_4 is an alkyl group containing between one and 24 carbon atoms; and X is a halide (see claims 1 and 8). The detergent composition typically include one or more surfactants (see column 8, lines 36 and 37). Document (1) furthermore indicates that polygalactomannans are polysaccharides composed principally of galactose and mannose units and are usually found in the endosperm of leguminous seeds, such as guar, locust bean, honey locust, flame tree, and the like, guar and locust bean gum being the preferred sources of the polygalactomannans and that the ratio of galactose to mannose in the guar polymer being 1:2 and in the locust bean gum 1:4 (see column 4, lines 35 to 39 and 44 to 49).

5.1.2 The Parties had divergent views on the issue of whether or not document (7) disclosed a polygalactomannan having a mannose:galactose ratio of 5:1. Although according to document (7) polygalactomannans from locust bean have a mannose:galactose ratio of 4:1, the Appellant relied on other documents, in particular documents (32) and (33), to support its allegation that the disclosure of locust bean gum in document (7) actually is equal to a disclosure of polygalactomannans having a mannose:galactose ratio of 5:1.

Regardless of whether or not a mannose:galactose ratio of 5:1 for polygalactomannans obtained from locust bean is disclosed in documents (32) or (33), the Board notes that according to the established jurisprudence a document does not disclose a specific technical feature if it does not emerge clearly and unambiguously

therefrom. Although polygalactomannans found in the endosperm of leguminous seeds encompass polygalactomannans having the claimed mannose:galactose ratio of 5:1, document (7) does not disclose clearly and unambiguously that ratio, with the consequence that the Board concurs with the finding of the decision under appeal in relation to the absence of any disclosure of that particular ratio in document (7).

6. *Inventive step (Article 56 EPC)*

According to the established jurisprudence of the Boards of Appeal it is necessary, in order to assess inventive step, to establish the closest state of the art, to determine in the light thereof the technical problem which the invention addresses and successfully solves, and to examine the obviousness of the claimed solution to this problem in view of the state of the art. This "problem-solution approach" ensures that inventive step is assessed on an objective basis and avoids an ex post facto analysis.

6.1 *Closest prior art*

Document (7) discloses a composition comprising a cationically derivatized polygalactomannan and surfactants (see point 5 above). The Board considers, in agreement with the Opposition Division and the Parties, that document (7) represents the closest state of the art, and, hence, takes it as the starting point in the assessment of inventive step.

6.2 *Technical problem underlying the patent in suit*

In view of document (7), the Respondent submitted that the technical problem underlying the patent in suit consisted in providing a composition having an improved hair conditioning effect.

6.3 *Solution*

The proposed solution to this problem is the polygalactomannan-containing composition according to claim 1 characterized in that the polygalactomannan has a mannose:galactose ratio of 5 : 1.

6.4 *Success*

6.4.1 In order to demonstrate that the technical problem as defined above has effectively been solved by the claimed compositions, the Respondent relied on the results of the comparison of the experimental reports filed with the letters of 4 June 2008 and 4 March 2010 (document (39)) and on the belated report filed on 15 October 2010. In these reports shampoo compositions comprising hydroxypropyltrimonium chloride-substituted polygalactomannan and differing from each other only by the structure of the polygalactomannan were compared for their conditioning effects on hair in wet and dry combing tests.

6.4.2 In the Experimental report filed with the letter of 4 June 2008, a composition comprising a polygalactomannan obtained by substituting cassia galactomannan with hydroxypropyltrimonium chloride to a degree of cationic substitution of 0.91 is compared

with a composition comprising the commercial product Jaguar[®] C13S which is a substituted guar galactomannan having a degree of cationic substitution of 0.19 (see example 1 on page 14 and 15 of the letter dated 4 June 2008).

In the experimental report filed with the letter of 4 March 2010 (document (39)), a composition comprising a commercial cassia hydroxypropyltrimonium chloride galactomannan having an average molecular weight (M_w) of 600000 and a degree of cationic substitution corresponding to a charge density of 3.0 mEq/g is compared with a composition comprising a commercial guar hydroxypropyltrimonium chloride galactomannan having an average molecular weight (M_w) of 1200000 and a degree of cationic substitution corresponding to a charge density of 0.7 mEq/g (see page 638, last paragraph).

In the belatedly-filed experimental report filed with the letter of 15 October 2010 compositions comprising cationic cassia are compared with compositions comprising cationic guar having similar cationic charge density or degree of cationic substitution.

According to the Respondent's uncontested submission the compositions comprising cationic cassia are according to the invention, since polygalactomannan obtained from cassia has a mannose:galactose ratio of 5:1, whereas those comprising cationic guar having a mannose:galactose ratio of 2:1, represent the closest prior art (see patent-in-suit, sentence bridging pages 2 and 3; document (7), column 4, lines 44 and 45).

However, since the polygalactomannans of the compared compositions are obtained from cassia and guar respectively, they differ one from the other not only by their mannose:galactose ratio, which is the characterizing feature of the invention, but also by their average molecular weight.

The Respondent had not contested the existence of this further structural difference between the compared polygalactomannans, but argued that it was not possible to carry out a comparison with polygalactomannans having exactly the same average molecular weight, since polygalactomannans are material which are obtained from biological sources, and that the average molecular weights of the compared polygalactomannans were anyway similar.

However the Respondent's submission that the average molecular weight of polygalactomannan obtained from cassia are similar to that obtained from guar does not seem to be supported by the facts, since the Respondent's experimental report of 4 March 2010 indicates that the average molecular weight of the compared polygalactomannans shows substantial molecular weight differences (600000 versus 12000000). Accordingly, in the absence of any substantiating facts and corroborating evidence, the Board considers this submission as a mere speculation, that the Board does not agree with.

6.4.3 According to established jurisprudence of the Boards of appeal, in the case where comparative tests are chosen to demonstrate an inventive step with an improved effect over a claimed area, the nature of the

comparison with the closest state of the art must be such that the effect is convincingly shown to have its origin in the distinguishing feature of the invention, i.e., in the present case, in the mannose:galactose ratio of the polygalactomannans of the claimed compositions.

Since, as submitted by the Appellant and confirmed by the Respondent's comparative test report, document (39), page 641, fourth paragraph, the molecular weight of the polygalactomannan is susceptible to have an impact on the conditioning of the hair, none of the Respondent's comparative test reports comparing polygalactomannans with different molecular weights can truly reflect the impact of the essential technical feature distinguishing the claimed composition from the closest prior art, namely the mannose:galactose ratio of 5:1 of the polygalactomannan. Hence, they do not properly demonstrate that the purported improvement of the claimed composition is necessarily due to the mannose:galactose ratio of 5:1 of the polygalactomannan comprised in the claimed compositions.

The failure of this belatedly filed test report to show a causal link between the characterising feature of the claim and the purported improvement is therefore a ground for not admitting it into the Appeal proceedings (see point 2.3 above).

6.4.4 In addition to the differences concerning the molecular weight and the mannose:galactose ratio, the polygalactomannans compared in the test reports filed on 4 June 2008 and 4 March 2010 further differ in their degree of cationic substitution, i.e. in their charge

density. However, as submitted by the Appellant and confirmed by the Respondent's comparative test report of document (39), page 641, fourth paragraph, the charge density also has an impact on the hair conditioning. Consequently, these test reports cannot show that the alleged improved hair conditioning has its origin in the distinguishing feature of the invention, namely the ratio mannose:galactose of 5:1 of the polygalactomannan, with the consequence that the comparisons and these test reports cannot support the alleged effect.

6.4.5 The Respondent alleged that the cationic guar used for the comparison was better than any other cationic guar of the prior art, however, without providing any comparative data in support of its argumentation. Hence, in the absence of any substantiating facts and corroborating evidence, the Board does not consider the Appellant's allegation to be correct.

6.4.6 As the test reports which according to the Respondent show the purported improvement are not based on fair comparisons, it is not necessary to evaluate their results. Furthermore, since the Respondent's test reports fail to show that the problem of improving hair conditioning is solved by the claimed compositions, it is unnecessary to address the Appellant's counter test report document (36).

6.4.7 Since the Respondent did not present a proper comparison between the closest prior art and the claimed invention, the purported technical effect on the conditioning of the hair is not supported by evidence.

According to the jurisprudence of the Boards of Appeal, alleged but unsupported effects cannot be taken into consideration for the determination of the problem underlying the claimed invention (see e.g. decision T 20/81, OJ EPO 1982, 217, point 3, last paragraph of the reasons).

6.4.8 Since in the present case the alleged effect, i.e. improvement of hair conditioning, lacks the required experimental support, the technical problem as defined above (see point 6.4.4) needs to be redefined in a less ambitious way, and in view of the teaching of document (7) can be seen as providing alternative cosmetic compositions.

6.5 *Obviousness*

Finally, it remains to be decided whether or not the proposed solution to this objective technical problem (see point 6.4.8 above) is obvious in view of the cited state of the art, namely whether the composition according to claim 1 of the patent in suit, is an obvious alternative composition in view of the state of the art.

6.5.1 The polygalactomannans of the cosmetic compositions disclosed in document (7) are polysaccharides composed principally of galactose and mannose units found in the endosperm of leguminous seeds, such as guar, locust bean, honest locust, flame tree. (see column 4, lines 35 to 39). Thus any polygalactomannans so covered, including therefore the polygalactomannans as specified in claim 1, are taught to be suitable for the

preparation of the cosmetic compositions according to document (7).

The choice of particular polygalactomannans within the ambit envisaged by the general teaching of document (7), i.e, those having a ratio mannose:galactose of 5:1 as required in claim 1, is therefore neither critical nor purposive for solving the objective problem underlying the patent in suit, but is an arbitrary restriction of no technical significance. Thus, this choice can be seen as lying within the routine activity of the skilled person faced with the objective problem of providing alternative compositions and thus does not involve an inventive step.

6.5.2 For these reasons, the subject-matter of claim 1 is obvious in the light of document (7).

6.5.3 The Respondent argued in support of inventive step that document (7) did not prompt the skilled person to select the polygalactomannans as specified in claim 1 of the patent in suit since document (7) only suggests polygalactomannans obtained from guar, locust bean, honest locust, flame tree, i.e. which are outside of the scope of present claim 1.

However, when seeking to provide mere alternative compositions, the skilled person does not restrict the teaching of document (7) to its preferred embodiments, but takes into consideration all features taught in that document, among them, using any polygalactomannan found in endosperm of leguminous seeds including cassia.

6.6 As a result, the Respondent's main request is not allowable for lack of inventive step pursuant to Article 56 EPC.

Auxiliary request 1

7. Claim 1 of auxiliary request 1 is identical to claim 1 of the main request, thus, the subject-matter of claim 1 of auxiliary request 1 is obvious and does not involve an inventive step.

Consequently, auxiliary request 1 is rejected for lack of inventive step.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar

The Chair

C. Rodríguez Rodríguez

C. Komenda