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**Datasheet for the decision
of 9 July 2024**

Case Number: T 0021/22 - 3.3.03

Application Number: 11805853.6

Publication Number: 2665753

IPC: C08B37/00, A23L3/349

Language of the proceedings: EN

Title of invention:

PRESERVATION OF BIOMASS MATERIAL COMPRISING PECTIN AND METHOD
FOR EXTRACTING PECTIN FROM PRESERVED BIOMASS MATERIAL

Patent Proprietor:

CP Kelco ApS

Opponent:

Cargill, Incorporated

Relevant legal provisions:

EPC Art. 56, 84, 123(2)
RPBA 2020 Art. 12(4), 12(6) sentence 2

Keyword:

Late-filed facts - error in use of discretion at first instance (yes) - admitted (yes)
Inventive step - main request - obvious alternative
Late-filed request - admitted (yes)
Amendments - extension beyond the content of the application as filed (no)
Late-filed objection - should have been submitted in first-instance proceedings (yes)
Inventive step - auxiliary request - improvement credible - non obvious solution
Claims - clarity - auxiliary request (yes)

Decisions cited:

G 0003/14, T 2324/14, T 2026/15, T 1525/17, T 0847/20



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Case Number: T 0021/22 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 9 July 2024

Appellant: Cargill, Incorporated
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
22 October 2021 concerning maintenance of the
European Patent No. 2665753 in amended form.**

Composition of the Board:

Chairman D. Semino
Members: M. Barrère
R. Cramer

Summary of Facts and Submissions

I. The appeal of the opponent lies from the interlocutory decision of the opposition division concerning maintenance of European Patent No. 2 665 753 in amended form on the basis of the claims of auxiliary request 1 filed during the oral proceedings on 6 September 2021 and an adapted description.

II. The following documents were *inter alia* cited in the decision of the opposition division:

D9: GB 2,222,172 B

D10: US 1,976,741

D20: US 2,727,033

III. The contested decision, as far as it is relevant to the present appeal, can be summarised as follows:

- Document D20 was not admitted into the proceedings.
- Claim 1 of auxiliary request 1 complied with the requirements of Articles 84 and 123(2) EPC.
- The subject-matter of claim 1 of auxiliary request 1 involved an inventive step over D9 as the closest prior art.

IV. The opponent (appellant) filed an appeal against said decision and submitted among others the following document with the statement of grounds of appeal:

D22: Oranges - Transport Information Service, dated 18 February 2022

V. With the rejoinder to the statement of grounds of appeal, the patent proprietor (respondent) filed forty-seven sets of claims as the first to forty-seventh auxiliary requests.

VI. With the letter dated 11 April 2024, the respondent filed thirty sets of claims as the first to thirtieth auxiliary requests replacing the auxiliary requests on file.

VII. Oral proceedings were held before the Board on 9 July 2024.

VIII. The final requests of the parties were the following:

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

The respondent requested dismissal of the appeal or alternatively maintenance of the patent on the basis of the claims of the thirtieth auxiliary request filed with letter dated 11 April 2024.

IX. Claim 1 of the request, which was found by the opposition division to comply with the requirements of the EPC (main request of the respondent), read as follows:

"1. A process for preserving fresh biomass material comprising pectin, the process comprising:

contacting the fresh biomass material with a preserving composition consisting of alcohol or alcohol and water to form a preserved biomass material; and

storing the preserved biomass material for at least 24 hours;

wherein alcohol is present in the preserving composition in an amount from 40 to 100% by weight of the preserving composition and the preserving composition is in an amount of at least 40% by weight of the biomass material;

wherein the biomass material is selected from the group consisting of citrus peel, apple pomace, sugar beet residue from sugar production, sun flower residue from sun flower oil production and potato residue from starch production."

Claim 1 of the thirtieth auxiliary request differed from claim 1 of the main request in that:

the contacting step was carried out "for a period from 45 seconds to 10 minutes", and

the process additionally included a step of "draining at least a portion of the preserving composition from the preserved biomass material after the contacting step".

The remaining claims of these requests are not relevant to this decision.

X. The appellant's submissions, in so far as they are pertinent to the present decision, may be derived from the reasons for the decision below. They were essentially as follows:

(a) Main request

(i) Inventive step

Document D20 should be admitted into the proceedings. The subject-matter of claim 1 of the main request lacked an inventive step over this document as the closest prior art.

(b) Thirtieth auxiliary request

(i) Admittance

The thirtieth auxiliary request should not be admitted into the proceedings.

(ii) Article 123(2) EPC

The subject-matter of claim 1 of the thirtieth auxiliary request contained subject-matter which was not originally disclosed in the application as filed.

(iii) Inventive step

The subject-matter of claim 1 of the thirtieth auxiliary request lacked an inventive step over D10 and D20 each taken as the closest prior art.

(iv) Article 84 EPC

The following features of claim 1 of the thirtieth auxiliary request lacked clarity:

the process step of "draining at least a portion of the preserving composition" and

the term "fresh" used to characterise the biomass material.

XI. The respondent's submissions, in so far as they are pertinent to the present decision, may be derived from the reasons for the decision below. They were essentially as follows:

(a) Main request

(i) Inventive step

The subject-matter of claim 1 of the main request involved an inventive step over D20 as the closest prior art.

(b) thirtieth auxiliary request

(i) Admittance

The thirtieth auxiliary request should be admitted into the proceedings.

(ii) Article 123(2) EPC

The subject-matter of claim 1 of the thirtieth auxiliary request did not extend beyond the content of the application as filed.

(iii) Inventive step

The objection based on D10 as the closest prior art should not be admitted into the proceedings.

The subject-matter of claim 1 of the thirtieth auxiliary request involved an inventive step over D20 as the closest prior art.

(iv) Article 84 EPC

The objection against the process step of "draining at least a portion of the preserving composition" should not be admitted into the proceedings.

The term "fresh" of claim 1 of the thirtieth auxiliary request was clear.

Reasons for the Decision

Main request (patent as maintained by the opposition division)

1. Inventive step

The appellant argued that claim 1 of the main request lacked an inventive step over document D20 taken as the closest prior art.

As D20 was not admitted into the proceedings by the opposition division, admittance of this document is to be decided upon first.

1.1 Admittance of D20

1.1.1 Document D20 was filed by the appellant on the day of the oral proceedings before the opposition division but was not admitted into the proceedings.

The reasons for not admitting D20 were its late filing and the fact that it was not *prima facie* relevant for the matter of novelty and inventive step (see contested decision, pages 6 to 16).

1.1.2 Although the respondent initially endorsed the arguments of the opposition division, they stated during the oral proceedings before the Board that they withdrew their objection to the admittance of document D20 into the proceedings (minutes of the oral proceedings, page 2, first full paragraph).

1.1.3 According to the appellant (letter dated 16 February 2024, pages 3 to 5, point 4.2), D20 was

filed in reaction to the new sets of claims submitted by the patent proprietor and in particular to the introduction of the term "fresh" into the claims. The appellant further contested the findings of the opposition division as to the *prima facie* relevance of D20.

1.1.4 The Board observes that the opposition division conducted a comprehensive examination of D20 in respect of novelty and inventive step prior to concluding that this document should not be admitted (contested decision, pages 9 to 16, points 1.2.1 to 1.3). In fact, the minutes of the oral proceedings (page 4, point 8.2.3) indicate that the opposition division concluded that claim 1 of the main request involved an inventive step over document D20 before announcing its non-admission.

1.1.5 The opposition division has therefore not carried out a mere *prima facie* assessment but has fully considered this document and the objections based upon it.

Thus, the Board holds that there was no discretion left for the opposition division not to admit D20 into the proceedings (reference is made to similar cases: T 1525/17, reasons 4.2 and 4.3; T 0847/20, reason 4.1; T 2026/15, reasons 2.4 and 2.5 and T 2324/14, reasons 2.4 to 2.6).

1.1.6 Consequently, document D20 is admitted into the proceedings, since it was *de facto* fully considered (and therefore implicitly admitted) by the opposition division.

1.2 Choice of the closest prior art

1.2.1 The appellant stated that D20 could be seen as the closest prior art for the subject-matter of claim 1 of the main request since the purpose of this document was to avoid the fermentation of citrus waste and the consequent formation of undesirable odours (D20, column 1, lines 21 to 25).

1.2.2 In agreement with the opposition division, the respondent argued that D20 could not be considered as the closest prior art document for claim 1 (rejoinder to the statement of grounds of appeal, pages 30 to 33, point 6.3). While D20 addressed transforming citrus waste to produce various products (not preserving it), the patent focused on preserving pectin-containing biomass material. The concern of D20 was fermentation related to odour control, not biomass preservation. Therefore the objectives of D20 differed fundamentally from those of the patent. The appellant's attempt to link the disposal problem of citrus waste in D20 with the preservation of biomass material was based on an unallowable *ex post facto* analysis. Furthermore, the respondent argued that the solution provided in D20 differed fundamentally from the method claimed in the opposed patent. Last but not least, the final product of D20 was hard and non gelatinous which would mean that the pectin was deactivated (letter of 2 July 2024, page 2, last paragraph).

1.2.3 With regard to the choice of D20 as the closest prior art, the Board agrees with the appellant for the following reasons:

- (a) The question to be answered is whether D20 is a reasonable starting point to evaluate inventive step of the subject-matter of present claim 1. According to established case law, a central

consideration in selecting the closest prior art is that it must be directed to a similar purpose or effect as the invention (Case Law of the Boards of Appeal, 10th edition 2022, in the following "Case Law", I.D.3.2).

- (b) The opposed patent relates to the preservation of biomass material for storage and subsequent use, such as for pectin extraction (paragraph [0002]). Specifically, a key problem that the claimed invention wishes to overcome is to the avoidance of degradation of citrus waste (paragraph [0004]). Contrary to the respondent's view, D20 addresses a similar problem, namely avoiding fermentation of citrus waste, and provides a method of treating said waste which results in a hard product which is "odorless, non-hygroscopic, and chemically and thermally stable" (D20, column 1, lines 21 to 25 and lines 51 to 55). Thus, although the word "preserve" is not used in D20, it is immediately clear to the skilled person that the purpose of the D20 process is to preserve the citrus waste for subsequent use in various applications. Indeed, the transformation of a citrus material that is prone to fermentation and undesirable odours into a dried, odourless and stable product is undeniably a form of preservation.
- (c) The respondent seems to imply that the preservation in the sense of the opposed patent is the maintenance of a biomass in a fresh state. This narrow interpretation is, however, not supported by the opposed patent. In fact claim 1 of the main request only requires that the biomass material is preserved without specifying which kind of preservation is meant. Claim 1 only requires the

starting material to be fresh as supported by paragraph [0015] of the opposed patent. In that respect, it is noted that the respondent did not contest that the citrus waste of D20 before treatment was also fresh.

(d) Finally, the argument that the pectin in the non-gelatinous material of D20 would be "deactivated" is not supported by evidence and must therefore be ignored. In any event, the scope of present claim 1 is not limited to a process for extracting pectin but to a process for preserving fresh biomass material. For these reasons, the respondent's argument is not convincing.

1.2.4 Therefore, as D20 is closely related to the technical field and to the purpose of the opposed patent, it is considered to be a reasonable starting point for assessing inventive step of the subject-matter of claim 1.

1.3 Technical difference

1.3.1 According to the appellant (statement of grounds of appeal, page 11, antepenultimate paragraph), the subject-matter of present claim 1 differed from example 4 of D20 in that:

(i) the treated biomass was stored for at least 24 hours.

1.3.2 The respondent did not contest distinguishing feature (i), but argued that it was an impermissible *ex post facto* analysis to select an example in which alcohol was used, rather than any embodiment of D20 in which other organic solvents were used (rejoinder to the

statement of grounds of appeal, page 32, penultimate paragraph).

- 1.3.3 According to established case law, where more than one embodiment can be selected as a starting point, the one which must be deemed the closest is that which provides the skilled person with the most promising springboard to the invention, i.e. the one starting from which the subject-matter of the invention is rendered most obvious (Case Law, I.D.3.4.1). Following this principle and in the absence of any effect linked to the nature of the organic solvent, the choice of an example wherein an alcohol is used (such as examples 1 to 12 or 17 of D20) is a more promising starting point than an example wherein a non-alcoholic organic liquid is used (such as examples 13 to 16 or 18 of D20).

Consequently, the Board agrees with the choice of example 4 as starting point for the assessment of inventive step.

- 1.3.4 The respondent further stated that D20 did not disclose a method for preserving a fresh biomass material comprising pectin (letter dated 24 June 2024, page 5, penultimate paragraph). This point has, however, already been rebutted by the Board (see point 1.2.3 above). Specifically, it was concluded that the purpose of the method disclosed in D20 was to preserve fresh citrus waste in order to avoid fermentation. Therefore, the purpose of the method of claim 1 does not constitute a distinguishing feature over example 4 of D20.
- 1.3.5 For these reasons, the Board agrees with the appellant that the subject-matter of present claim 1 differs from example 4 of D20 in that:

- (i) the treated biomass is stored for at least 24 hours.

1.4 Problem to be solved

1.4.1 The respondent agreed with the opposition division that the objective technical problem to be solved over document D20 was the provision of an alternative process for obtaining industrially useful and valuable products from biomass materials such as citrus waste (letter of 24 June 2024, first full paragraph).

1.4.2 The appellant formulated the objective technical problem as the provision of an alternative storage time (statement of grounds of appeal, page 11, penultimate paragraph).

1.4.3 The Board is not convinced that the formulation suggested by the appellant is correct since it contains a pointer to the solution: i.e. the choice of a different storage time (Case Law, I.D.4.2.1). In view of that and considering that, even if the formulation of the objective technical problem of the respondent is accepted, an inventive step is not acknowledged, the Board, to the benefit of the respondent, will accept the formulation proposed by them.

1.5 Obviousness of the claimed solution

1.5.1 It needs to be evaluated whether it was obvious, starting from example 4 of D20, for a skilled person wishing to provide an alternative process for obtaining industrially useful and valuable products from biomass materials to:

(i) store the treated biomass material of example 4 of D20 for at least 24 hours.

1.5.2 The respondent argued that the claimed solution was not obvious in view of D20 because this document taught a fundamentally different approach, namely transforming citrus waste into industrial products, not preserving biomass for pectin extraction. They emphasised that D20 did not suggest storing the treated material, particularly for at least 24 hours, as required by the patent claim. This storage step was crucial in the patent for allowing to carry out the pectin extraction at a convenient place and time, especially when transportation was involved (letter dated 24 June 2024, page 6, third paragraph to page 7, second full paragraph).

1.5.3 The respondent's argumentation is based upon the assumption that the process of claim 1 is suitable to preserve the biomass for a future pectin extraction while this would not be the case for the process of D20 and that the storage step was essential to achieve that purpose. However, it is pointed out that the objective problem to be solved explicitly suggested by the respondent was merely the provision of an alternative process for obtaining industrially useful and valuable products from biomass materials and not the provision of a process suitable for pectin extraction. Furthermore, the Board did not review the part of the decision concerning the formulation of the technical problem to be solved, as there was no real dispute or explicit disagreement. Consequently, the respondent's submissions under the question of obviousness did not address the relevant point and are therefore not convincing.

1.5.4 For the sake of completeness, as noted in the section concerning the choice of the closest prior art (point 1.2.3 above), the Board agrees with the appellant there is no evidence that the process of D20 is not suitable to preserve citrus waste in order to obtain pectin in a subsequent extraction. Furthermore, the statement that the storage time of at least 24 hours was advantageous was not supported by evidence.

1.5.5 In view of the fact that the choice of a storage time of at least 24 hours is not linked to any technical effect, the Board considers that it cannot justify an inventive step. As noted previously, the treated citrus waste of D20 is "hard, light-colored, odorless, non-hygroscopic, and chemically and thermally stable" in contrast to the fresh citrus waste (before treatment) which is prone to fermentation (D20, column 1, lines 21 to 25 and lines 51 to 55). It is therefore obvious for a person skilled in the art to store this stable product for a period of at least 24 hours.

1.6 For these reasons, the subject-matter of claim 1 of the main request lacks an inventive step over D20 as the closest prior art.

Thirtieth auxiliary request

2. Admittance

2.1 The thirtieth auxiliary request is a new request filed with the letter dated 11 April 2024. Its admittance to the proceedings is subject to the provisions of Article 13(1) RPBA.

2.2 According to the respondent, the thirtieth auxiliary request corresponded to the eighth auxiliary request

filed during opposition proceedings and the forty-second auxiliary request filed with the rejoinder to the statement of grounds of appeal. The respondent contended that only minor amendments had been made, which did not introduce new subject-matter. The thirtieth auxiliary request was filed in reaction to a new objection under Rule 80 EPC against dependent claim 2 of the forty-second auxiliary request and to align the subject-matter of claim 1 with the claims of the main request (letter dated 11 April 2024, page 2, penultimate paragraph and annex 1 attached to that letter, page 2). The respondent further pointed out that the issue pertaining to dependent claim 2 had been addressed in the majority of the 47 auxiliary requests filed with the rejoinder. However, this correction had been inadvertently omitted in the forty-second auxiliary request.

2.3 The appellant requested that the thirtieth auxiliary request not be admitted into the proceedings. They argued that the respondent had provided scant reasoning for submitting this request so late in the appeal proceedings. They further stated that an objection under Rule 80 EPC had already been raised during the opposition proceedings against claim 2 of the then main request and that the patent proprietor had deleted this claim 2 in reaction to that objection (contested decision, page 5, second paragraph). Therefore, it was the appellant's position, that the thirtieth auxiliary request could and should have been filed at the latest with the rejoinder to the statement of grounds of appeal.

2.4 The Board notes that two amendments have been introduced in the thirtieth auxiliary request compared

to the eighth auxiliary request filed during opposition proceedings.

2.4.1 Amendment of claim 1: the preserving composition was specified to "consist[] of alcohol or alcohol and water.". This amendment, initially introduced in the forty-second auxiliary request filed with the rejoinder to the statement of grounds of appeal, was made necessary to align the eighth auxiliary request to the request found allowable by the opposition division (prohibition of *reformatio in peius*). As such this first amendment submitted was not only mandatory but initially filed at the first opportunity during the appeal proceedings (i.e. with the rejoinder to statement of grounds of appeal).

2.4.2 Deletion of dependent claim 2: while the Board recognises that an objection under Rule 80 EPC against claim 2 of the then main request had already been raised during the opposition proceedings, it is clear from the majority of the 47 auxiliary requests filed with the rejoinder to the statement of appeal that the respondent intended to delete that dependent claim. However, this deletion had been omitted in the forty-second auxiliary request. Hence, the filing of the thirtieth auxiliary request, which remedies this omission by deleting claim 2, is considered to be admissible since this was clearly the original intention of the respondent. Furthermore, the deletion of a dependent claim obviously does not add new subject-matter or create a new problem.

2.5 Under these circumstances, the Board finds it appropriate to exercise its discretion under Article 13(1) RPBA by admitting the thirtieth auxiliary request into the proceedings.

3. Article 123(2) EPC

3.1 Claim 1 of the thirtieth auxiliary request reads as follows (additions as compared to claim 1 of the application as filed in **bold**; deletions in ~~strikethrough~~):

"A process for preserving **fresh** biomass material comprising ~~polysaccharide~~ **pectin**, the process comprising:

contacting the **fresh** biomass material with a preserving composition ~~comprising~~ **consisting of** alcohol **or alcohol and water for a period from 45 seconds to 10 minutes** to form a preserved biomass material;

draining at least a portion of the preserving composition from the preserved biomass material after the contacting step; and

storing the preserved biomass material for at least 24 hours;

wherein alcohol is present in the preserving composition in an amount from 40 to 100% by weight of the preserving composition and the preserving composition is in an amount of at least 40% by weight of the biomass material; and

wherein the biomass material is selected from the group consisting of citrus peel, apple pomace, sugar beet residue from sugar production, sun flower residue from sun flower oil production and potato residue from starch production."

3.2 During the oral proceedings before the Board, the appellant argued that claim 1 of the thirtieth auxiliary request resulted from the combination of multiple selections, said combination having no basis in the application as filed. The selections concerned were the following:

- (a) a specific alcohol amount from a list of ranges in paragraph [0018];
- (b) a specific amount of the preserving composition from a list of ranges in paragraph [0019];
- (c) a specific group of biomass materials from the list of materials in paragraph [0012];
- (d) a specific polysaccharide, i.e. pectin, that must be contained by the biomass material from the list given in paragraph [0025];
- (e) a biomass which was "fresh" from paragraph [0015];
- (f) a specific contacting period from the list of ranges in paragraph [0020] and
- (g) a draining step from paragraph [0023].

Although it was not disputed that each of the features of present claim 1 were originally disclosed, they contended that the content of an application must not be considered to be a reservoir from which features pertaining to separate embodiments of the application could be combined.

The appellant further argued that examples 1 to 5 of the application as filed did not support a contacting period of 45 seconds to 10 minutes. In addition, the draining step was incompatible with the said contacting period. Indeed, in the case of dipping (such as in example 6), the draining step was not necessary.

As there was no pointer in the application as filed to the combination of features of present claim 1, they concluded that the subject-matter of this claim did not comply with the requirements of Article 123(2) EPC.

- 3.3 In that respect the Board agrees with the respondent that the subject-mater of present claim 1 is directly and unambiguously derivable from the application as filed (rejoinder, pages 6 and 7, points 1.12 and 1.13 and pages 18 to 21, point 4.1). The reasons therefore are as follows:
- 3.3.1 While it is established case law that amendments based on multiple selections from independent lists can go beyond the content of the application as filed, the Board does not consider that the specific features (a) to (g) mentioned above can be seen as such multiple selections (see Case Law, II.E.1.6.2 a), as well as I.C.6.2.1 b) in the context of novelty where the same principles apply).
- 3.3.2 Features (a) and (b): with regard to the amount of alcohol ("40 to 100% by weight of the preserving composition") and of the preserving composition ("at least 40% by weight of the biomass material"), the ranges specified in claim 1 of the thirtieth auxiliary request correspond to the broadest ranges of paragraphs [0018] and [0019] of the application as filed. They encompass all other ranges defined in these paragraphs. Therefore these amounts cannot be seen as selections from a list of (converging) alternatives.
- 3.3.3 Features (c) and (d): as to the specific group of biomass materials, it is noted that paragraph [0012] of the application as filed specifies three main groups of suitable materials:

"citrus fruit peel, apple pomace, sugar beet residue from sugar extraction, sunflower residue from oil extraction, potato residue from starch production, and other biomass materials comprising pectin",

"red seaweed comprising carrageenan and agar" and

"brown seaweed comprising alginate".

The choice of "citrus fruit peel, apple pomace, sugar beet residue from sugar extraction, sunflower residue from oil extraction, potato residue from starch production" is therefore the result of two deletions (deletion of red and brown seaweed) from a single list of biomass materials. From that point of view, the deletion of single elements in a list is also not considered to be a selection resulting in the singling out of a particular element (Case Law, II.E.1.6.2 b)).

Moreover, paragraph [0012] of the application as filed makes it clear that "citrus fruit peel, apple pomace, sugar beet residue from sugar extraction, sunflower residue from oil extraction, potato residue from starch production" are biomass materials comprising pectin. The term pectin is therefore inextricably linked to the list of possible biomass materials as defined in present claim 1 and not a selection in a list of possible polysaccharides.

3.3.4 Feature (e): it is apparent from paragraph [0015] of the application as filed that the biomass material may be "fresh". In view of the fact that the purpose of the claimed invention is to preserve a biomass material for storage and later use (paragraph [0002] of the

application as filed), the Board considers that the choice of "fresh" biomass as starting material is at least preferred, if not an essential feature of the claimed invention, but definitely not a selection from a list of alternative options.

- 3.3.5 Feature (f): the contacting period of 45 seconds to 10 minutes is disclosed individually in original claim 9. It was further not disputed that an original claim can be combined with a specific embodiment of the description without necessarily infringing the requirements of Article 123(2) EPC.
- 3.3.6 Feature (g): the draining step is disclosed individually (and not in a list) in paragraph [0023] of the application as filed. As to the argument that a step of dipping would not be compatible with a draining step, this alleged fact is not supported by example 6 as filed which shows that a dipping step can be followed by a draining step (paragraph [0255] of the application as originally filed).
- 3.3.7 Although none of the features (a) to (g) is individually considered to be a selection from a list of alternative options, it remains to be evaluated whether the combination of these features finds a direct and unambiguous basis in the application as filed. In that respect, the Board considers that features (a) to (g) all relate to the process for preserving a biomass material as defined in original claim 1 and can therefore be combined with that embodiment. In addition, example 6 of the original application combines features (a) to (g) in a single embodiment, thereby constituting a pointer to the subject-matter of claim 1 of the thirtieth auxiliary request.

3.4 In view of the above, it is considered that the subject-matter of claim 1 of thirtieth auxiliary request is directly and unambiguously derivable from the application as filed and therefore meets the requirements of Article 123(2) EPC.

4. Inventive step

4.1 Claim 1 of the thirtieth auxiliary request differs from claim 1 of the main request in that:

the contacting step is carried out "for a period from 45 seconds to 10 minutes", and

the process additionally comprises a step of "draining at least a portion of the preserving composition from the preserved biomass material after the contacting step".

4.2 The appellant argued that claim 1 of the thirtieth auxiliary request lacked an inventive step over each of the documents D10 and D20 taken as the closest prior art.

4.3 D10 as the closest prior art - Admittance

4.3.1 In the statement of grounds of appeal (pages 12 and 13, point 6.3), the appellant raised an objection of lack of inventive step against claim 1 of the main request, based on document D10 as the closest prior art. During the oral proceedings before the Board, this objection was also pursued against claim 1 of the thirtieth auxiliary request.

- 4.3.2 The respondent considered that the present objection of lack of inventive step was raised for the first time during the appeal proceedings. Hence it should not be admitted into the proceedings as no reason had been provided for raising this objection at this stage of the proceedings (rejoinder, pages 26 and 27, point 6.1).
- 4.3.3 Article 12(6) RPBA provides that the Board shall not admit amendments to a party's case (requests, facts, objections or evidence) which should have been submitted, or which were no longer maintained, in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance.
- 4.3.4 The appellant contended that an objection concerning a lack of inventive step starting from D10 had been initially submitted in the notice of opposition and should therefore be admitted.
- 4.3.5 The first question to be answered by the Board is therefore whether the objection of lack of inventive step based on document D10 against the thirtieth auxiliary request constitutes an amendment to the appellant's case. If that question is answered in the negative, then the Board has no discretion not to take the submission into account. In view of the fact that the thirtieth auxiliary was also filed late into the proceedings, the Board will first evaluate whether the inventive step objection based on D10 against the main request would have been admitted into the proceedings and then whether that conclusion applies to the thirtieth auxiliary (taking into account its late-filing).

- 4.3.6 In the present case, it is acknowledged that an objection of lack of inventive step based on D10 as the closest prior art was raised in the notice of opposition (pages 15 and 16, point 6.4). However, this objection concerned claim 13 as granted, but not claim 1 as granted or claim 1 of the main request. It is furthermore pointed out that multiple amendments have been introduced in claim 1 of the main request (which was the subject of the contested decision). There is therefore no reason to assume that an objection raised initially against a granted claim would automatically apply to claim 1 of the main request, let alone to claim 1 of the thirtieth auxiliary request. For this reason, the objection of lack of inventive step starting from D10 as the closest prior art is considered to be an amendment to the appeal case, the admittance of which is subject to the discretion of the Board.
- 4.3.7 The second question to be answered by the Board is whether the objection against the main request should have been submitted in the opposition proceedings. In that respect, it is noted that claim 1 of the main request (corresponding to auxiliary request 1 of the opposition proceedings) was the subject of the contested decision. Therefore, the Board considers that an objection of lack of inventive step based on D10 against this claim should have been submitted during the opposition proceedings at the latest at the oral proceedings before the opposition division. Furthermore, the appellant has not put forward any circumstance of the appeal proceedings which would justify its admittance in the appeal proceedings.
- 4.3.8 Finally, despite its late filing, it is pointed out that the scope of claim 1 of the thirtieth auxiliary

request is more limited than the scope of claim 1 of the main request. Therefore, it cannot be argued that present claim 1 is not inventive with respect to document D10 while this would not be already the case with respect to claim 1 of the main request.

4.3.9 Under these circumstances, the Board finds it appropriate to exercise its discretion under Article 12(6) RPBA by not admitting the present objection into the proceedings.

4.4 D20 as the closest prior art

During the oral proceedings before the Board, the respondent maintained that D20 was not a suitable starting point to evaluate inventive step of claim 1 of the thirtieth auxiliary request. In view of the fact that the Board concluded that the subject-matter of present claim 1 involved an inventive step even if D20 is chosen as the closest prior art, the question whether D20 is a suitable starting point does not need to be addressed. In any event, the reasons for selecting D20 as the closest prior art for the main request remain valid.

4.4.1 Technical differences

During the oral proceedings before the Board, the parties agreed that the subject-matter of claim 1 of the thirtieth auxiliary request differed from example 4 of D20 at least in that:

- (i) the biomass material was contacted with a preserving composition for a period from 45 seconds and 10 minutes and

- (ii) the treated biomass was stored for at least 24 hours (emphases added by the Board).

The Board has no reason to depart from that view. It is merely noted that the respondent argued that further distinguishing features should be acknowledged. In view of the fact that the Board concluded that the subject-matter of present claim 1 involved an inventive step on the basis of distinguishing feature (i) alone, it is not necessary to evaluate whether other distinguishing features were present.

4.4.2 Problem to be solved

- (a) During the oral proceedings before the Board, the respondent argued that example 6 of the opposed patent provided evidence that a short period of time for the contacting step was sufficient to stabilise the biomass material and to extract pectin after storage. In contrast thereto, the processes disclosed in D20 required a long contacting time. As a result the objective problem to be solved should be formulated as the provision of an efficient process for preserving a pectin containing biomass material.
- (b) The appellant argued that example 6 of the opposed patent required a large amount of ethanol compared to the orange peel content which would be the reason for any technical effect derived from that example. The contacting period was, however, not linked to any technical effect. Therefore the problem to be solved should be seen as the provision of an alternative process.

- (c) The Board notes that D20 pertains to a process for treating pectinous waste comprising contacting the waste with an organic solvent "until the water content of the waste has been non-evaporatively displaced therefrom and the water-soluble constituents have been separated from the waste" (D20, claim 1). Hence D20 requires a nearly complete extraction of the water and any water-soluble constituents of the waste. In practice, the examples of D20 show that this process requires multiple steps of extraction in a Soxhlet type extractor (15 steps in the case of example 4). Although the time required for this extraction is not specified in example 4 of D20, it can be inferred from other examples that this extraction typically takes 4 to 8 hours (see examples 3 and 5 to 12 of D20). Conversely, example 6 of the opposed patent provides evidence that a single contacting step of 1 or 10 minutes followed by draining is sufficient to obtain a stabilised pectinous material whose pectin can be extracted with a relatively stable quality and yield even after 7 days of storage (see table 6A of the opposed patent, samples 105 and 106 vs. sample 115). In view of these differences, the Board finds it credible that the process according to claim 1 is more efficient than the process of D20.
- (d) As regards the appellant's argument that the amount of ethanol in example 6 of the patent is the reason for any improvement, this point is not supported by evidence and must therefore be ignored. In any event, it is pointed out that said amount is not a distinguishing feature between present claim 1 and example 4 of D20.

- (e) Consequently, the objective problem to be solved over D20 is formulated as the provision of a more efficient process for preserving pectin containing biomass material.

4.4.3 Obviousness of the claimed solution

- (a) It needs to be assessed whether it was obvious to a skilled person wishing to make the processes of D20 more efficient to reduce the contact time to between 45 seconds and 10 minutes.
- (b) The respondent argued that the claimed solution was not obvious in view of D20 because this document taught a fundamentally different approach requiring a nearly complete extraction of the water and any water-soluble compounds in order to provide a dry material. They emphasised that the time required for that extraction was extremely long and not a realistic solution in an industrial context. Moreover it could not be expected in view of the teaching of D20 that the pectinous material could be preserved despite the short contacting step.
- (c) According to the appellant, the skilled person would have reduced the contacting period through routine experimentation and would have arrived to the subject-matter of present claim 1 without any inventive skills.
- (d) As regards the question of obviousness, it is pointed out that the crux of the invention of D20 is to extract the water from the pectinous waste in order to provide a dry material (D20, claim 2). This process requires multiple extraction steps and a contacting period between the alcohol and the

waste of several hours (see examples of D20).

Therefore the Board agrees with the respondent that the skilled person on the basis of this teaching would not have expected that a single contacting period of less than 10 minutes (as shown in example 6 of the opposed patent) would be sufficient to obtain a stable material (even if in a different form) in an efficient manner.

4.4.4 For this reason, it was not obvious for a person skilled in the art starting from D20 as the closest prior art to reduce the contacting period to 45 seconds to 10 minutes (distinguishing feature (i)). Consequently, the subject-matter of claim 1 of the thirtieth auxiliary request involves an inventive step starting from D20 as the closest prior art.

5. Clarity

5.1 The appellant raised two objections of lack of clarity against claim 1 of the thirtieth auxiliary request which will be addressed separately in what follows:

(a) the first one related to the interpretation of the expression "at least a portion" in the step of draining the preserving composition;

(b) the second one concerned the meaning of the term "fresh" to characterise the biomass material.

5.2 Clarity of the draining step - admittance

5.2.1 According to the appellant, the alcohol being a volatile liquid, it should evaporate quickly and easily at room temperature. Therefore, in view of the fact that the preserving composition could consist of

alcohol, it was unclear whether the evaporation of some of the volatile liquid could be compatible with a step of draining "at least a portion" of the preserving composition or not. This additional amendment to claim 1 caused a further lack of clarity when combined with the amendments included from the description (letter of 16 February 2024, page 17, point 13.3.2).

- 5.2.2 The respondent argued that the allegedly unclear feature was already present in the claims as granted. Hence the present objection should have been raised during opposition proceedings and should therefore not be admitted into the appeal proceedings.
- 5.2.3 The Board agrees with the respondent that granted claim 9 already included a draining step as defined in claim 1 of the thirtieth auxiliary request. It is also pointed out that the preserving composition according to granted claim 1 could also consist of alcohol. Thus, the alleged problem due to evaporation of alcohol was already present in the granted claims. Moreover, it is not credible that the potential lack of clarity was caused or increased by any combination with limiting features taken from the description which are unrelated to the draining step. The Board therefore considers that the present objection could and should have been raised against claim 9 as granted.

As an aside, the Board observes that since the alleged lack of clarity was already present in the granted claims, this objection cannot be examined, as clarity is not a ground for opposition (see G 3/14, catchword).

- 5.2.4 Under these circumstances, the Board finds it appropriate to exercise its discretion under Article

12(6) RPBA by not admitting the present objection into the proceedings.

5.3 Clarity of the term "fresh"

5.3.1 The appellant argued that the term "fresh" introduced in present claim 1 to characterise the biomass material was unclear (statement of grounds of appeal, point 3 on pages 2 to 6). Therefore claim 1 would not comply with the requirements of Article 84 EPC.

5.3.2 The appellant's arguments may be summarised as follows:

(a) The term "fresh" lacked a generally accepted definition. Various definitions of "fresh" were provided by the patentee (based on dictionaries), the opposed patent and the opposition division.

(b) Disagreement arose between these definitions because they impose different requirements. The definitions also created ambiguity. For example, the use of the term "recently harvested" in the patent's definition in paragraph [0015] was unclear.

(c) The lack of clarity in defining "fresh" led to confusion and uncertainty for the skilled person in distinguishing fresh products from non-fresh ones.

5.3.3 In that respect the Board agrees with the respondent (rejoinder to the statement of grounds of appeal, pages 10 to 18, point 3) for the following reasons:

(a) It is firstly pointed out that the patent should be approached with a "mind willing to understand", not a mind desirous of misunderstanding the content of

the opposed patent within the context of its technical field (Case Law, II.A.6.1.). This entails recognising the terminology used in the patent and interpreting it based on the knowledge and expertise of a skilled person in the relevant field. While there may be variations in interpretation, particularly regarding terms like "fresh," a diligent reading with a willingness to grasp the patent's intended purpose is essential for a comprehensive understanding.

(b) With regard to the reading of the term "fresh" in the present technical field, the Board is not convinced that there is a genuine lack of clarity, even taking into account the different definitions put forward by the parties and the opposition division and in the patent. Despite apparent differences, a closer examination reveals a convergence toward a common understanding of the term "fresh" within the context of the patent:

(i) The patent provides a definition of "fresh" biomass material as that which is recently harvested or subjected to specific extraction processes without substantial drying or degradation (paragraph [0015]). This definition emphasises the minimisation of degradation, aligning with the patent's focus on obtaining pectin in an unaltered form.

(ii) Similarly, the opposition division's definition of "fresh" biomass emphasises the absence of rot or significant degradation, along with avoidance of further processing steps aimed at

degradation (contested decision, page 20, second paragraph). While phrased differently, this definition shares the concept of maintaining the natural state of biomass materials.

- (iii) The dictionary defines "fresh" as not tinned, frozen or otherwise preserved (letter of the patentee dated 6 July 2021, page 2, third paragraph). In the Board's view, this definition does not contradict the previous ones. Instead, it highlights the distinction between short-term preservation methods aimed at maintaining freshness versus long-term preservation methods intended for extended storage. The apparent discrepancy between the dictionary (excluding preservation) and the fact that oranges are typically "preserved" to maintain their freshness during transport (as submitted by the appellant on the basis of D22) can be resolved by considering the intended scope within each context. In the dictionary, "preserved" typically refers to long-term preservation (such as freezing or canning), methods incompatible with the concept of freshness. In contrast, within the context of document D22, "preservation" refers to techniques aimed at maintaining the freshness of oranges, such as controlled atmosphere storage (D22, page 5, section "RF temperature"). After all, while oranges were preserved during transport, supermarket customers can easily tell that the oranges on sale are fresh, even if they were harvested weeks earlier in a distant

country. Therefore, it is the Board's understanding that the term "fresh" does not exclude any preservation directed to the maintenance of the freshness of the biomass and that the term "preserved" in the dictionary definition should be interpreted differently.

- (c) Despite differences in language and emphasis, the definitions provided in the patent, by the opposition division and in the dictionary ultimately converge toward a shared understanding of "fresh" within the context of biomass preservation. Each definition emphasises the importance of minimising degradation and preserving natural qualities, albeit with varying degrees of specificity and focus. Therefore, rather than representing divergent interpretations, they collectively contribute to a comprehensive understanding of the term "fresh". Moreover, in the context of preserving a biomass material, the Board tends to consider that it would make little sense to preserve a starting material that is not fresh in the first place.

5.3.4 During the oral proceedings before the Board, the appellant did not refer to the different definitions of the term "fresh" but argued that the meaning of that term should be clear for the person skilled in the art from the wording of the claim alone. Hence, the opposition division should not have relied on the description to define this term.

5.3.5 The Board agrees with the appellant that the claims should normally be clear in themselves, without any reference to the content of the description (Case Law,

II.A.3.1). However, as explained previously, the Board considers that the term "fresh" is clear as such, especially in the context of preserving a biomass material. The different definitions (which had been discussed by the appellant in their statement of grounds of appeal) only confirmed that conclusion.

5.3.6 For these reasons, the Board does not consider that the term "fresh" lacks clarity.

5.3.7 For the sake of completeness, it should be noted that the Board did not have to rule on the admittance of document D22 (submitted by the appellant), since the term "fresh" was considered to be clear even if that document was taken into account.

6. As all objections raised and maintained against the thirtieth auxiliary request are either unsuccessful or not admitted, the patent is to be maintained on the basis of this request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent on the basis of the claims of the thirtieth auxiliary request filed with letter of 11 April 2024, after any necessary consequential amendment of the description.

The Registrar:

The Chairman:



D. Hampe

D. Semino

Decision electronically authenticated