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**Datasheet for the decision
of 15 November 2018**

Case Number: T 2542/16 - 3.3.10

Application Number: 10780131.8

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B65B25/00, A01N25/00, C11D1/00,
C11D1/72, A01N25/30

Language of the proceedings: EN

Title of invention:
WETTING AGENTS FOR ASEPTIC FILLING

Applicant:
Ecolab USA Inc.

Headword:

Relevant legal provisions:
EPC Art. 123(2), 56

Keyword:
Amendments - main request and first auxiliary request -
allowable (no) - second auxiliary request - allowable (yes)
Inventive step - second auxiliary request - (yes)

Decisions cited:

Catchword:



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Case Number: T 2542/16 - 3.3.10

D E C I S I O N
of Technical Board of Appeal 3.3.10
of 15 November 2018

Appellant: Ecolab USA Inc.
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St. Paul, MN 55102 (US)

Representative: Godemeyer Blum Lenze Patentanwälte
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 4 July 2016
refusing European patent application No.
10780131.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman P. Gryczka
Members: R. Pérez Carlón
T. Bokor

Summary of Facts and Submissions

- I. The appellant (applicant) lodged an appeal against the decision of the examining division refusing European patent application EP 10780131.8.
- II. The documents cited in the examination proceedings include the following:
- D1 WO 2010/131217 A2
D6 US 2005/0101516 A1
D9 US 2005/0032668 A1
- III. The examining division concluded that the requirements of Articles 123(2), 83 and 84 EPC were fulfilled, but the use according to claim 13 of the main request then pending was not novel over D1 and D6, and the method for aseptic packaging according to claim 1 of the first and second auxiliary requests then pending was not inventive.
- IV. The board informed the appellant in a communication dated 17 July 2018 that it should be prepared to discuss at the oral proceedings before it issues under Articles 123(2) and 84 EPC, and that it was inclined to share the view of the examining division that document D9 was the closest prior art for the assessment of inventive step.
- V. During the oral proceedings before the board, which took place on 15 November 2018, the appellant withdrew all its requests filed with the statement of grounds of appeal. The requests filed by letter dated 18 September 2018 became its main request and first auxiliary request, and the request filed during the oral proceedings before the board became its second

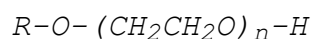
auxiliary request.

VI. Claim 1 of the second auxiliary request reads as follows:

"A method for aseptic packaging of food, beverages or pharmaceuticals comprising:

(a) contacting a package with a composition consisting essentially of a wetting agent, and an antimicrobial agent, wherein the wetting agent consists essentially of:

(i) a sheeting agent, wherein the sheeting agent is at least one compound having the structure represented by formula I:



wherein R is a (C₁-C₁₂) alkyl group, and n is an integer in the range of 1 to 100;

(ii) a defoaming agent, wherein the defoaming agent is a polyoxypropylene-polyoxyethylene block copolymer surfactant;

(iii) one or more of an association disruption agent, wherein the one or more association disruption agent is an alcohol alkoxyate, wherein the alkoxyate portion of the association disruption agent is selected from the group consisting of mixtures of ethylene oxides, propylene oxides, butylene oxides, pentalene oxides, hexylene oxides, heptalene oxides, octalene oxides, nonalene oxides, decylene oxides, and

(iv) an additional ingredient selected from the group consisting of a carrier, a hydrotrope, a chelating/sequestering agent, and combinations thereof,

(b) filling the package with a substance selected from the group consisting of food, beverage, pharmaceutical, and combinations thereof; and
(c) sealing the package."

VII. Claim 1 of the main request and first auxiliary request contains, instead of the definition of component (iii) as above, the following:

"(iii) one or more of an association disruption agent, wherein the one or more association disruption agent comprises an alcohol alkoxyate, wherein the alkoxyate portion of the association disruption agent is a mixture of ethylene oxides and propylene oxides;"

VIII. The arguments of the appellant where relevant for the present decision were as follows:

Feature (iii) of claim 1 of the main request and first auxiliary request found a basis in page 2, lines 19 to 23; page 16, lines 3 to 7 and in the examples of the application. Claim 1 of the second auxiliary request found a basis in the combination of claims 1, 5, 10, 11 and 12 of the application as originally filed. The dependent claims found a basis in those as filed and on page 2, lines 1-2, of the application. For these reasons, none of these requests contained added subject-matter.

Document D9 was the closest prior art, and the technical problem underlying the claimed invention was how to provide a method for aseptic packaging which made it possible to achieve better adherence of the antimicrobial composition, shorter drying time and lower foaming. The solution was characterised by using a wetting agent consisting essentially of components

(i), (ii) and (iii). Even if the problem as formulated above were not considered solved and were reformulated as an alternative method for aseptic packaging, the state of the art did not hint at the claimed solution, which for this reason was inventive.

IX. The final requests of the appellant were that the decision under appeal be set aside and a patent be granted on the basis of the main request, or subsidiarily, on the basis of the first or second auxiliary requests; the main request and first auxiliary request having been filed as sixth and seventh auxiliary requests with a letter dated 18 September 2018, the second auxiliary request having been filed as the eighth auxiliary request at the oral proceedings before the board.

X. At the end of the oral proceedings, the decision was announced.

Reasons for the Decision

1. The appeal is admissible.

Main request, first auxiliary request

2. Amendments

2.1 Claim 1 of the main request and first auxiliary request requires (iii) one or more of an association disruption agent which comprises an alcohol alkoxyate whose alkoxyate portion is a mixture of ethylene oxides and propylene oxides.

2.2 The appellant argued that the basis for this feature could be found in the passages of the description of

the application as originally filed on page 2, lines 19 to 23, page 16, lines 3 to 7, and in the examples.

- 2.3 The passage on page 2, lines 19 to 23, discloses that the alkoxyate portion of the association disruption agent is selected from a group consisting of a list of nine different alkylene oxides, including ethylene oxides and propylene oxides, *"and mixtures and derivatives thereof"*. This passage fails however to disclose the specific combination of ethylene and propylene oxides required by claim 1.
- 2.4 The passage on page 16, lines 3 to 7, discloses that *"in some embodiments, the alcohol alkoxyate includes a polyoxyethylene- polyoxypropylene copolymer surfactant (an "alcohol EO/PO surfactant"). The alcohol EO/PO surfactant can include a compact alcohol EO/PO surfactant where the EO and PO groups are in small block form, or random form."*

Claim 1 requires an alkoxyate portion which is "a mixture of ethylene oxides and propylene oxides", which includes alkoxyate portions having only one ethylene oxide and only one propylene oxide unit. In contrast, the passage on page 16 discloses a polyoxyethylene polyoxypropylene copolymer surfactant, i.e. requires more than one unit of ethylene and propylene oxide and thus also fails to provide the required basis.

Composition A of examples 1 to 4 discloses as component (iii) two "alkoxylated alcohols" and one "fatty alcohol alkoxyate", without further definition. This composition thus also fails to provide the required basis.

Lastly, the compositions of example 5 do not contain an

antimicrobial agent and are thus not according to the invention. For this reason alone, these compositions fail to provide the required basis. In addition, the compounds disclosed as association disruption agents have features such as the number of alkylene oxide units and the nature of the alcohol which are not required by claim 1.

For this reason, the feature (iii) incorporated in claim 1 of the main request and the first auxiliary request extends beyond the content of the application as originally filed (Article 123(2) EPC), with the consequence that the main request and the first auxiliary request are not allowable.

Second auxiliary request

3. Amendments

3.1 Claim 1 finds a basis in the combination of claims 1, 5, 10, 11 and 12 as originally filed, with the restriction that the alkoxyate portion of the association disruption agent is selected from mixtures of alkylene oxides.

Although claims 5, 10 and 12 were not mutually dependent, the sheeting agents of formula (I) (claim 5) are the sole agents disclosed in the application and are thus to be seen as combined with the remaining embodiments of the invention. The specific combination of components (ii) and (iii) required by claim 1 is disclosed on page 2, lines 16-23 of the application as originally filed.

3.2 Claim 2 finds a basis on page 2, lines 1-2. Claims 3 to 7 find a basis on claims 13, 15 and 17 to 19

respectively.

3.3 The requirements of Article 123(2) EPC are thus fulfilled.

4. Inventive step

4.1 Claim 1 of the second auxiliary request is directed to a method for aseptic packaging of food, beverages or pharmaceuticals comprising contacting a package with a composition consisting essentially of a wetting agent and an antimicrobial agent, filling it with food, a beverage or a pharmaceutical component, and sealing it.

The wetting agent required by claim 1 consists essentially of

- (i) a sheeting agent of formula (I),
- (ii) a polyoxypropylene-polyoxyethylene block copolymer surfactant as defoaming agent,
- (iii) an association disruption agent which is an alcohol alkoxylate whose alkoxylate portion is a mixture of alkylene oxides, and
- (iv) a carrier, hydrotrope or chelating/sequestering agent and combinations thereof.

The method provides a process for aseptic packaging using an antimicrobial composition allowing for low foaming, moderately low viscosity, increased wetting properties and increased drying and draining times (page 4, lines 20 to 22).

4.2 Closest prior art

At the oral proceedings before the board, the appellant agreed with the finding of the examining division that document D9 was the closest prior art. The board sees

no reason to differ.

Document D9 relates to antimicrobial compositions (claim 1) for aseptic packaging of food [0184] which contain octanoic acid and an alkoxyated amine [0005].

These compositions may optionally contain surfactants [0074] which can be of formula (I) ([0077], lines 8 to 9; [0197], lines 1 to 3 and last two lines), block polyoxypropylene-polyoxyethylene polymeric compounds ([0083] [0106]) and mixed ethoxylated and propoxylated fatty alcohols [0103].

Embodiment (a) in Table 1 [0199] of D9 discloses a composition comprising

- phosphoric acid and octanoic acid (antimicrobial agents)
- citric acid 50% (a chelating agent, iv)
- water (a carrier, iv)
- an alkoxyated amine
- a non-ionic surfactant

In paragraph [0197], document D9 lists non-ionic surfactants suitable for the compositions exemplified. Among them, Tomadol 1-7, Tomadol 1-3 and Neodol 91-6 are non-ionic surfactants of formula (I) according to claim 1 and thus sheeting agents (i).

Claim 20 of D9 relates to a composition comprising a compound of formula (I), a carboxylic acid antimicrobial agent and an alkoxyated amine.

Document D9 thus discloses a method for aseptic packaging of food using a composition containing an antimicrobial agent, a chelating agent, a carrier and a

wetting agent, which can contain a compound as defined by formula (I) of claim 1. It fails however to disclose a method which uses the specific combination of surfactants required by claim 1.

4.3 The technical problem underlying the invention

The appellant argued that the technical problem underlying the claimed invention was how to provide a method for aseptic packaging which made it possible to achieve better adherence of the antimicrobial composition, shorter drying time and lower foaming.

The question of whether or not the problem as formulated by the appellant has been solved in all aspects can be left aside, since the board holds that even if the technical problem is reformulated as merely the provision of an alternative method for aseptic packaging of food, beverages or pharmaceuticals being, like that of the prior art, suitable for reducing microbial population in the final product, the proposed solution is not obvious.

4.4 Solution

The solution to this technical problem is the claimed method, characterised in that it requires a wetting agent consisting essentially of the combination of components (i), (ii) and (iii).

4.5 Success

The board has no reason to doubt that the problem of providing an alternative method for aseptic packaging of food, beverages or pharmaceuticals suitable for reducing microbial population in the final product has

been credibly solved by the claimed method.

- 4.6 It thus remains to be decided whether or not the proposed solution to the objective problem defined above is obvious from the prior art.

The skilled person, trying to obtain an alternative method for aseptic packaging of food, beverages or pharmaceuticals, does not find any hint to use a composition having the specific combination of components required by claim 1.

Document D9 discloses surfactants only as optional components. It envisages not only non-ionic, but also semi-polar non-ionic and anionic surface active agents [0075]. The list of suitable non-ionic surfactants extends from paragraph [0080] to paragraph [0107] throughout four columns of D9.

Preferred non-ionic surfactants according to D9 are

- alcohol alkoxyates, which is a feature that includes components (i) and (iii) required by claim 1, but is broader than any of them,
- EO/PO block copolymers (component ii of claim 1) and
- alkylphenol alkoxyates, which are not required by claim 1.

The examples of D9 only discloses two compositions comprising compounds of formula (I) (g2, h2), which either lack antimicrobial effect (h2) or are not stable (g2).

Thus, in order to arrive to the claimed invention, the skilled person needs to take as a starting point

compositions which are disclosed as less preferred, choose to add further surfactants, choose non-ionic surfactants and, lastly, select from the long list provided in D9 specifically those required by claim 1. Even seeking to obtain an alternative, these selections could only have been made with the benefit of hindsight.

None of the documents cited by the examining division contain a hint at the surfactant combination required by claim 1 either. Document D6, cited by the examining division in the context of inventive step, is silent on alcohol alkoxyates derived from mixtures of alkylene oxides and relates not to antimicrobial compositions, but to rinse aids. Thus, the skilled person would not have combined its content with that of D9 and, even if they had done, would not have arrived at the claimed invention.

The board thus concludes that the skilled person could only have arrived at the claimed compositions with the benefit of hindsight when looking for an alternative to the method of document D9, with the consequence that the method of claim 1 of the second auxiliary request is inventive within the meaning of Article 56 EPC.

5. Remittal

The description of the application contains subject-matter not within the scope of the claims of the second auxiliary request and thus requires amendment (Article 84 EPC). The board decided to make use of its discretion to remit the case to the examining division for the description to be adapted (Article 111(1) EPC). The appellant did not object to such remittal.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to grant a patent on the basis of the following:
Claims 1-7 of the 2nd auxiliary request as filed and amended during the oral proceedings before the board, titled "8th Auxiliary Request"
and a description and drawings to be adapted.

The Registrar:

The Chairman:



C. Rodríguez Rodríguez

P. Gryczka

Decision electronically authenticated