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**Datasheet for the decision  
of 23 June 2010**

**Case Number:** T 1088/07 - 3.3.01

**Application Number:** 01912896.6

**Publication Number:** 1259113

**IPC:** A01N 37/36

**Language of the proceedings:** EN

**Title of invention:**

Acidic antimicrobial compositions for treating food and food contact surfaces and methods of use thereof

**Patentee:**

HealthPro Brands Inc.

**Opponent:**

Henkel AG & Co. KGaA

**Headword:**

Antimicrobial compositions/HEALTHPRO BRANDS

**Relevant legal provisions:**

EPC Art. 54, 84

**Relevant legal provisions (EPC 1973):**

-

**Keyword:**

"Main request, auxiliary request 4 - novelty (no)"

"Auxiliary requests 1 to 3 - clarity (no)"

**Decisions cited:**

T 0860/93

**Catchword:**

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Case Number: T 1088/07 - 3.3.01

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.01  
of 23 June 2010

**Appellant:** Henkel AG & Co. KGaA  
(Opponent) Henkelstrasse 67  
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**Representative:** Mundt, Linda  
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**Respondent:** HealthPro Brands Inc.  
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**Representative:** Watkins, David  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
25 May 2007 concerning maintenance of European  
patent No. 1259113 in amended form.

**Composition of the Board:**

**Chairman:** P. Ranguis  
**Members:** L. Seymour  
C.-P. Brandt

## Summary of Facts and Submissions

I. European patent No. 1 259 113, which was filed as application number 01 912 896.6, based on international application WO 01/64035, was granted on the basis of twenty-five claims, four of which were independent.

Independent claim 1 as granted, which is identical to claim 1 of the claim set forming the basis of the decision under appeal, reads as follows:

"1. A stabilized, concentrated, acidic antimicrobial composition **characterized by** forming a substantially clear diluted aqueous treatment composition upon dilution, said stable, concentrated, acidic antimicrobial composition comprising:

- (a) from 5% to 95%, by weight of said concentrated composition, of an organic acid;
- (b) from 1% to 80%, by weight of said concentrated composition, of a surfactant;
- (c) a stabilizing agent;
- (d) optionally, a buffer;
- (e) optionally, optionally, [*sic*] toxicologically-acceptable anti-foaming agent;
- (f) optionally, toxicologically-acceptable preservative;
- (g) optionally, perfume, flavoring agent, and/or coloring agent; and
- (h) the balance comprising compatible, toxicologically-acceptable inert and/or minor ingredients;

wherein said concentrated composition has a pH of from 2 to 5 upon dilution; and wherein a ratio of said

stabilizing agent to said surfactant is from 10:1 to 1:20."

II. An opposition was filed and revocation of the patent in its entirety requested pursuant to Article 100(a) EPC, for lack of novelty and inventive step.

III. The following documents were cited *inter alia* during the opposition/appeal proceedings:

- (1) WO 94/10837
- (2) JP 57-176903
- (3) WO 95/07616
- (5) German-language translation of document (2)
- (6) English-language translation of document (5)

IV. The appeal lies from the interlocutory decision of the opposition division to maintain the patent in suit in amended form, based on the main (sole) request filed during the oral proceedings before the opposition division.

The opposition division held that the subject-matter of the main request met the requirements of novelty, since claim 1, read in the light of paragraph [0015] of the patent in suit, excluded compositions in which the stabilizing agent was an organic acid. The opposition division therefore considered that the compositions disclosed in document (1) did not fall within the scope of claim 1 of the main request.

With respect to the issue of inventive step, the opposition division identified document (2) as representing the closest prior art and defined the problem to be solved as lying in the provision of an

optimisation of the disclosure of document (2). The opposition division considered the solution as claimed in the main request to involve an inventive step since no objective hint could be found in the prior art directing the skilled person to the specific selection of concentrations of components and pH values as claimed.

- V. The appellant (opponent) lodged an appeal against this decision, and filed document (5) with the grounds of appeal.
- VI. With letter of 15 November 2007, a third party filed observations under Article 115 EPC with accompanying documentation citing public prior use as an obstacle to patentability.
- VII. With its letter of response of 31 March 2008, the respondent (patentee) filed counterarguments.
- With further letter of 24 May 2010, the respondent filed three auxiliary requests, together with document (6).
- VIII. Oral proceedings were held before the board on 23 June 2010.
- IX. During the course of oral proceedings, the respondent filed auxiliary requests 1 to 3 to replace the previously filed auxiliary requests. The respective claims 1 of these requests differed from claim 1 according to the main request (cf. point I above) in that they each included the following proviso inserted at the end of the claim: "wherein, if an ingredient

from the above list can appear in more than one place, it appears in the first place that it can appear". In addition, the range recited under (a) was restricted to "30% to 85%" and "60% to 80%" in claims 1 of auxiliary requests 2 and 3, respectively.

Following a discussion on the issue of clarity, the respondent filed auxiliary request 4. Claim 1 of this request differed from claim 1 according to the main request in restrictions in the definitions of components (a), (b) and (c) such that

- (a) the organic acid is "selected from the group consisting of citric acid, lactic acid, malic acid, salicylic acid, acetic acid, adipic acid, hydroxyacetic acid, dehydroacetic acid, glutaric acid, tartaric acid, fumaric acid, succinic acid, propionic acid, aconitic acid, sorbic acid, benzoic acid, gluconic acid, ascorbic acid, alanine, lysine and mixtures thereof";
- (b) the surfactant is "selected from the group consisting of anionic surfactant, nonionic surfactant, acid-sensitive amphoteric surfactants, and mixtures thereof"; and
- (c) the stabilizing agent is "selected from the group consisting of selected nonionic materials, polymeric materials, electrolytes, and mixtures thereof".

X. The appellant's arguments, insofar as they are relevant to the present decision, can be summarised as follows:

Concerning the main request, the appellant argued that the subject-matter of claim 1 lacked novelty with respect to several of the sanitizer concentrate

compositions according to document (1), such as samples 5, 6, 8, and 22 to 27 disclosed in Table 1. In this context, the appellant maintained that the use of organic acids as stabilizing agents was not excluded by the wording of claim 1 of the main request. Referring to page 4 of document (1), lines 1 to 3, the appellant further submitted that the compositions according to document (1) also clearly fulfilled the requirement of having "a pH of from 2 to 5 upon dilution".

Regarding the proviso added to claims 1 of auxiliary requests 1 to 3, the appellant considered that this amendment resulted in a lack of clarity of the claims, since its intended meaning was unclear, particularly in view of the resulting discrepancies with the description of the patent in suit. In this context the appellant pointed to the fact that several ingredients were listed in the description under more than one category, and not only in the first place they could appear.

With respect to auxiliary request 4, the appellant raised an objection of admissibility, in view of the extensive nature of the amendments performed at an advanced stage of the proceedings.

In the context of the discussions on the issue of novelty of auxiliary request 4, the appellant submitted that claim 1 could not be read as excluding compositions comprising large amounts of ethyl alcohol, such as those disclosed in document (2). The appellant further argued that the specific function assigned to the ingredient Pluronic in document (3) was irrelevant

when assessing the novelty of a claim directed to compositions as such.

XI. The respondent's arguments, insofar as they are relevant to the present decision, can be summarised as follows:

As regards the objection of lack of novelty of the subject-matter of claim 1 of the main request with respect to document (1), the respondent submitted that, said claim defined a composition comprising at least three different components, namely, an organic acid as component (a), a surfactant as component (b), and a stabilizing agent as component (c). Therefore, on a natural reading, the language of the claim excluded compositions in which the stabilizing agent was an organic acid. Furthermore, the respondent argued, with reference to decision T 860/93 (OJ EPO 1995, 47, point 5.1 of the reasons), that the proper interpretation of the claims was "to be derived by having regard to the document as a whole". In the present case, when claim 1 was read in the light of paragraphs [0007] and [0015] of the patent in suit, it was clear that all organic acids were to be classified as component (a). The subject-matter according to claim 1 of the main request was therefore novel, since document (1) disclosed compositions in which component (c) was an organic acid.

In the respondent's opinion, a further distinguishing feature with respect to document (1) could be seen in the fact that a strong acid, such as phosphoric or sulfuric acid, was present in large amounts in the compositions according to document (1). This was



excluded by the wording of claim 1 of the main request, since component (h) making up the balance of the claimed compositions was limited to inert and/or minor ingredients.

With respect to auxiliary requests 1 to 3, the respondent argued that the proviso introduced into the respective claims 1 provided clear instruction to place components with multifunctionality in the highest category listed.

The respondent argued that auxiliary request 4 should be admitted into the proceedings, since it had been filed in response to objections raised for the first time with respect to Article 84 EPC.

The respondent further submitted that the subject-matter of claim 1 of auxiliary request 4 was clearly novel with respect to documents (2) and (3).

Referring to the bactericidal compositions I and II disclosed on page 8 of document (6), which is the English-language version of document (2), the respondent argued that ethyl alcohol was clearly a major ingredient. This was confirmed by reference to page 3 of the general description (paragraph 2), wherein the concentrates were defined as containing from 20 to 180 parts by weight of ethyl alcohol, based on 1 part by weight of organic acid. In contrast, component (h) making up the balance of the compositions according to claim 1 of auxiliary request 4 was defined as being a minor ingredient.

In addition, the respondent submitted that the functions defined for components (b) and (c) in claim 1 of auxiliary request 4 were to be regarded as novelty rendering features. In particular, polyoxyethylene-polyoxypropylene block copolymers, available under the trade name Pluronic, served as nonionic surfactants according to document (3) (page 4, lines 4 to 8; page 7, line 20). In contrast, within the meaning of the patent in suit, such polymers were employed as stabilizing agents (paragraph [0046]).

Furthermore, documents (2) and (3) did not disclose the pH of the diluted compositions obtained from the disclosed concentrates, and the skilled person could not recognise whether pH values within the range of 2 to 5, as required by claim 1 of auxiliary request 4, could be achieved.

XII. The appellant (opponent) requested that the decision under appeal be set aside and that the European patent No. 1 259 113 be revoked.

The appellant further requested not to admit the Fourth Auxiliary Request into the proceedings as being late filed.

The respondent (patentee) requested that the appeal be dismissed (main request), or alternatively, that the patent be maintained on the basis of one of the auxiliary requests 1-4 filed during the oral proceedings.

XIII. At the end of the oral proceedings, the decision of the board was announced.

### **Reasons for the Decision**

1. The appeal is admissible.
2. *Admissibility of requests filed during oral proceedings before the board*

The board decided to exercise its discretion to admit into the proceedings auxiliary request 1 to 4 filed during oral proceedings before the board (Article 13(1) RPBA).

The amendments introduced in auxiliary requests 1 to 3 related to a fair and straightforward attempt to overcome an objection of added subject-matter raised for the first time at oral proceedings with respect to the corresponding auxiliary requests 1 to 3 filed with the letter of 24 May 2010.

Similarly, the amendments to auxiliary request 4 mainly consisted in the incorporation of features of dependent claims of the main request into claim 1. These simple restrictions were a clear and direct response to the objections raised under Article 84 EPC with respect to auxiliary requests 1 to 3.

3. *Main request - novelty*
  - 3.1 Claim 1 of the main request is directed to "a stabilized, concentrated, acidic antimicrobial composition", which comprises at least three components, namely, an organic acid (component (a)), a surfactant

(component (b)) and a stabilizing agent (component (c)). A concentration range is defined for components (a) and (b), as well as a range for the ratio of components (c) to (b). The balance is defined under (h).

Two further features are present in claim 1, namely, "characterized by forming a substantially clear diluted aqueous treatment composition **upon dilution**" and "wherein said concentrated composition has a pH of from 2 to 5 **upon dilution**" (emphasis added).

However, claim 1 relates to a concentrate, and it is evident that the pH and appearance of the diluted solution will not only depend on characteristics of the corresponding concentrate, but also on the nature and properties of dilution medium used (e.g. pH, hardness), as well as the degree of dilution. These parameters are not defined in claim 1. In the absence of all the required information, the pH and appearance of the final compositions cannot be correlated with characteristics of the concentrate. Consequently, the features relating to the pH and appearance of the final composition upon dilution cannot be viewed as features delimiting the product claimed in claim 1, and must therefore be disregarded in assessing novelty.

Accordingly, claim 1 properly understood encompasses any acidic antimicrobial composition that comprises at least one organic acid, a second component falling within the functional definition "surfactant" and a third component falling within the functional definition "stabilizing agent", in the concentrations and proportions defined in claim 1.

- 3.2 Document (1) relates to dilutable acid sanitizer concentrate compositions comprising, *inter alia* (see claims 1 and 12),
- (a) a germicidally effective **fatty acid**;
  - (b) a hydrotrope-solubilizer, preferably an ionic **surfactant** selected from alkane sulfonates and disulfonates; and
  - (c) a **stabilizing component** selected from the group consisting of propionic, butyric and valeric acids and mixtures thereof.

A number of specific embodiments of compositions according to document (1) are disclosed in Tables 1 to 7. To take but one example, sample 6 according to Table 1 (page 8) has the following composition, given in percentage by weight, where the balance to 100% of each sample is water (cf. page 7, lines 12 to 14):

98% Octane sulfonate	12
H <sub>3</sub> PO <sub>4</sub> (85%)	30
Octanoic acid	4.8
Decanoic acid	3.2
Propionic acid	10

This composition thus contains a surfactant (first component, 12 wt%), germicidally effective organic acids (third and fourth components, 8 wt%) and a stabilizing agent (last component; ratio of stabilizing agent to surfactant 1:1.2). The concentrations and ratio defined in claim 1 according to the present main requested are thus clearly respected.

The above composition therefore comprises all the features of the composition according to present claim 1.

- 3.3 The respondent's arguments in favour of novelty of claim 1 of the main request do not hold for the following reasons:

The board cannot agree with the respondent that a natural reading of claim 1 rules out that any of the other ingredients, apart from component (a), could be an organic acid. Components (b) and (c) are defined in functional terms, and any ingredient which is suitable for the purpose specified will therefore fall within the corresponding functional definition. Hence, the wording of claim 1 cannot exclude that the further components of the defined composition may comprise a second organic acid in addition to component (a). This reading is consistent with the fact that a number of organic acids are listed as potential surfactants in paragraph [0040] of the patent in suit.

Furthermore, the description cannot be relied on to justify a narrower claim construction than what is encompassed by a technically meaningful reading of the claim. If, as in the present case, due to the claim wording, the object encompassed is not new, then it is necessary to amend the wording of this claim, on condition that such an amendment complies with the requirements of *inter alia* Articles 123(2) and 84 EPC, so that the claim itself reflects the intended limitation. Article 69(1) EPC, relied on by the respondent, does not offer any basis for reading into a claim features which can be found in the description

when judging novelty. Moreover, decision T 860/93, referred to by the respondent, is not considered to be pertinent to the present case. The issue in that decision was whether recourse could be had to the description to determine whether the claims were clear. However, clarity is not at issue in the present case.

Finally, contrary to the respondent's contention, the wording of claim 1 does not exclude the presence of a strong acid, or large amounts thereof. Thus, the use of the term "comprising" in the definition of component (h) does not rule out the presence of further ingredients in addition to the "compatible, toxicologically-acceptable inert and/or minor ingredients". The possibility of using phosphoric acid in conjunction with an organic acid is also specifically envisaged in the patent in suit (cf. paragraph [0032]). Moreover, since the lower limits of the concentrations specified for components (a) and (b) add up to 6 percent by weight, it is not excluded that large amounts of further ingredients may be present.

- 3.4 Consequently, the respondent's main request fails for lack of novelty of claim 1 (Articles 52(1) and 54(2) EPC).

In view of this conclusion, there is no need to examine the alleged public prior use (cf. point VI above)

4. *Auxiliary requests 1 to 3 - clarity*

- 4.1 The composition according to claim 1 of auxiliary request 1 is characterised by means of a structurally defined component (a), and a number of functionally

defined mandatory and optional components. In addition, claim 1 comprises a proviso according to which, "if an ingredient from the above list can appear in more than one place, it appears in the first place that it can appear".

Since this proviso was introduced in the course of appeal proceedings, it must be examined whether claim 1 so amended meets the requirements of Article 84 EPC.

Article 84 EPC stipulates that the claims shall define the matter for which protection is sought. Thus, the question to be answered in the present case is whether it is possible to reliably determine whether a particular composition falls within claim 1 or not.

It has not been disputed that a given ingredient may perform more than one function. Examples of such ingredients that can be derived from the patent in suit include polysorbates (nonionic surfactant and stabilizing agent; paragraphs [0038] and [0046]), sodium carbonate (stabilizing agent and buffer; paragraphs [0045] and [0053]), or polypropylene glycol (stabilizing agent and anti-foaming agent; paragraphs [0047] and [0060]).

The present proviso attempts to define a hierarchy for the classification of these ingredients. However, it is apparent that there are no clear and reliable criteria for establishing whether, in the context of a particular composition, a specific ingredient should be viewed as being multifunctional, or whether a particular functionality must be viewed as being dominant and any remaining functionalities disregarded.



Thus, for example, in claim 6 of auxiliary request 1, which depends on claim 1, "polysorbates" are listed as being one of the preferred stabilizing agents. This is inconsistent with the proviso in claim 1, according to which polysorbate should be placed "in the first place that it can appear", that is, it should be classified as a surfactant (cf. patent in suit, paragraph [0038]). An analogous inconsistency is present in Example III of the patent in suit, wherein Tween<sup>TM</sup> 81, which is a polysorbate, is said to be a stabilizing agent rather than a surfactant.

Similarly, the block copolymers known under the trade name Pluronic are classified as stabilizing agents in the patent in suit (paragraph [0046]), and as surfactants in document (3) (see page 4, lines 4 to 6; page 7, line 20).

The proviso thus introduces a subjective element into the determination of the subject-matter for which protection is sought. Different conclusions may be reached as to whether a given composition falls within the scope of the claim depending on an arbitrary step of classification.

Consequently, the person skilled in the art on reading the claim 1 of auxiliary request 1 is not able to derive a clear definition of what is intended to be claimed.

The respondent effectively argued that claim 1 was clear since the skilled person would be able to understand wording used in the claims. However, as

explained above, the claims must also be clear in their purpose of defining the subject-matter for which protection is sought, a requirement that is not fulfilled in the present case.

Consequently, claim 1 of auxiliary request 1 does not fulfil the requirements of Article 84 EPC.

4.2 Since claims 1 of auxiliary requests 2 and 3 also contain the same proviso and functional definitions of ingredients, the conclusions under point 4.1 apply equally to these requests.

Therefore, claims 1 of auxiliary requests 2 and 3 also do not meet the requirements of Article 84 EPC.

4.3 Accordingly, auxiliary requests 1 to 3 must be refused for lack of clarity of claim 1 (Article 84 EPC).

5. *Auxiliary request 4 - novelty*

5.1 Claim 1 of auxiliary request 4 differs from claim 1 of the main request in the incorporation into claim 1 of specific lists of ingredients from dependent claims (cf. point IX above). In particular, the "organic acid" is now selected from a list of specific acids which no longer encompasses fatty acids (cf. point 3 above). However, despite this limitation, the novelty of the subject-matter of claim 1 cannot be acknowledged, namely, with respect to cited prior art documents (2) and (3). For the purpose of the analysis below, the English-language version of Japanese patent document (2) is referred to, i.e., document (6). It is noted that

the correctness of the latter has not been called into question by the parties.

5.1.1 Document (6) relates to bactericidal compositions for disinfection of foodstuffs and crockery containing:

- (a) organic acid
- (b) inorganic salt
- (c) ethyl alcohol and
- (d) sodium lauryl sulphate (SLS) or thiamine lauryl sulphate (TLS)

(page 1, claim; page 3, last paragraph).

The compositions are preferably produced as concentrated unprocessed solutions (page 3, paragraph 2). Specific examples of such bactericidal compositions are disclosed on page 8, whereby bactericidal composition I has the following composition:

Citric acid	0.35 g
Table vinegar (10 % acetic acid)	0.35 mL
Cooking salt	0.19 g
Ethyl alcohol	1.25 mL
SLS	0.25 g

Bactericidal composition II differs from this composition in that SLS is replaced by TLS.

These compositions thus comprise components corresponding to components (a) to (c) as defined in present claim 1, namely:

- (a) citric acid;

- (b) SLS or TLS, which are anionic surfactants (see patent in suit, paragraph [0036] and document (6), page 3, paragraph 3); and
- (c) cooking salt, which is an electrolyte (cf. patent in suit, page 8, lines 38 to 40).

The concentrations and proportions thereof clearly also lie within the ranges defined in present claim 1.

5.1.2 Document (3) relates to disinfectant compositions for use on foods (cf. claim 1).

A particularly preferred concentrated composition is disclosed on page 7 as follows (concentrations given in wt%):

Glycerol monolaurate	1.0
Propylene glycol monocaprylate	2.5
Propylene glycol monocaprate	2.5
Lactic acid	6.0
Pluronic F-68 surfactant	10.0
Propylene glycol	15.0
Dioctyl sodium sulfosuccinate (50 wt.% in ethanol)	10.0
Deionized water	53.0

Thus, this composition comprises 6 wt% of lactic acid (cf. present component (a)), 5 wt% of the anionic surfactant dioctyl sodium sulfosuccinate (cf. document (3), page 3, last paragraph; patent in suit, page 7, lines 44, 45), and 10 wt% of Pluronic. According to the patent in suit, the latter is a polymeric stabilizing agent (see page 8, lines 44 to 46).

This composition therefore also comprises components (a), (b) and (c) according to present claim 1, in the correct concentrations and proportions.

- 5.2 The features identified by the respondent cannot be regarded as features distinguishing the subject-matter of present claim 1 from said prior art, for the following reasons:

As explained above under point 3.3 (last paragraph), it cannot be accepted that component (h) must be present as a minor component. Moreover, in view of the use of the conjunction "and/or" in (h), it is clear that the balance may comprise "compatible, toxicologically-acceptable inert ... ingredients", a definition which encompasses ethyl alcohol. The quantity of ethyl alcohol present in the composition reproduced under point 5.1.1 above is thus clearly not excluded by the wording of present claim 1.

Moreover, it is irrelevant to the assessment of novelty of a claim relating to a product *per se*, such as present claim 1, that Pluronic is classified as a surfactant in document (3) and as a stabilizing agent in the patent in suit. The fact that different functional labels are attributed to a given specific component does not alter the substance of the corresponding compositions themselves. Similarly, the composition according to document (6) and that according to present claim 1 are one and the same despite the fact that no specific function is disclosed for the cooking salt in document (6).

Finally, for reasons explained above under point 3.1, the subject-matter of present claim 1 cannot be read as being limited by the feature relating to the pH of the final composition upon dilution.

- 5.3 The board concludes that the compositions reproduced under points 5.1.1 and 5.1.2 above comprise all the features of the acidic antimicrobial compositions according to claim 1 of auxiliary request 4.

Consequently, auxiliary request 4 fails for lack of novelty of claim 1 (Articles 52(1) and 54(2) EPC).

## **Order**

### **For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The European patent No. 1 259 113 is revoked.

The Registrar:

The Chairman:

C. Eickhoff

P. Ranguis