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Datasheet for the decision of 30 September 2008

Case Number: T 1395/06 - 3.3.06

Application Number: 96935987.6

Publication Number: 0904343

IPC: C11D 3/48

Language of the proceedings: EN

Title of invention:
Germicidal acidic hard surface cleaning compositions

Patentee:
Reckitt Benckiser Inc.

Opponent:
The Procter & Gamble Company

Headword:
Germicidal hard surface cleaner/RECKITT

Relevant legal provisions:
EPC Art. 123(2)

Relevant legal provisions (EPC 1973):
EPC Art. 56, 114(1),(2)
RPBA Art. 12(4), 13(1)

Keyword:
"Admissibility of some documents submitted for the first time during appeal (yes)"
"Added subject-matter (no)"
"Sufficiency of disclosure (yes): descriptive terms known in the art"
"Inventive step (yes)"

Decisions cited:
T 0409/91, T 0435/91, G 0010/91

Catchword:

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1395/06 **-** 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 30 September 2008

Appellant: (Opponent)	The Procter & Gamble Company One Procter & Gamble Plaza Cincinnati Ohio 45202 (US)
Representative:	Kellenberger, Jakob NV Procter & Gamble Services Company SA Temselaan 100 BE-1853 Strombeek-Bever (BE)
Respondent: (Patent Proprietor)	Reckitt Benckiser Inc. Morris Corporate Center IV 399 Interpace Parkway Parsippany New Jersey 07054 (US)
Representative:	Hayes, Adrian Chetwynd Boult Wade Tennant Verulam Gardens 70 Gray's Inn Road London WC1X 8BT (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted 4 July 2006 concerning maintenance of European patent No. 0904343 in amended form.**

Composition of the Board:

Chairman: P.-P. Bracke
Members: L. Li Voti
A. Pignatelli

Summary of Facts and Submissions

I. The present appeal is from the decision of the Opposition Division to maintain in amended form European patent no. 0 904 343 concerning a germicidal acidic hard surface cleaning composition.

II. In its notice of opposition the Opponent, referring *inter alia* to documents

(2): EP-A-288856;
(3): WO92/05237;
(4): WO92/21238; and
(7): Experimental data - Evaluation of disinfecting effect,

sought revocation of the patent on the grounds of Article 100(a) EPC, because of lack of novelty and inventive step of the claimed subject-matter, and of Article 100(b) EPC.

The Patent Proprietor submitted with letter of 29 July 2005 a new experimental report (hereinafter document (7a)) which repeated the experiments of document (7) at lower pHs and a new set of amended claims 1 to 7 to be considered as main request.

The Opponent raised thereafter an objection under Article 123(2) EPC against claim 1 according to the new main request.

III. In its decision, the Opposition Division found *inter alia* that

- claim 1 according to the main request, consisting in a combination of claims 1, 5 and 7 as originally filed, complied with the requirements of Article 123(2) EPC;

- the objections raised by the Opponent under Article 100(b) regarded the clarity of claim 1 and not sufficiency of disclosure; in fact, even though the term "germicidal" used in claim 1 was a descriptive one and did not limit precisely the claimed composition, the skilled person would have been able to prepare a composition as claimed without undue burden;

- the claimed subject-matter was novel over the cited prior art.

As regards inventive step the Opposition Division found that

- a composition which leads to the killing of microorganisms at least to a considerable extent must be regarded as being a germicidal composition as required in claim 1;

- the experimental results of tables 1, 2 and 5 of the patent in suit and of the experimental report (7a) showed that the claimed compositions had solved the technical problem addressed to in the patent in suit of providing hard surface cleaning compositions having a disinfecting effect and the capacity of removing soap scum stains and hard water stains whilst minimizing the irritation of eyes, skin or mucous tissue;

- therefore, there was no justification for reformulating the technical problem underlying the invention as suggested by the Opponent as being simply the provision of an alternative hard surface cleaning composition;

- the Opponent had not submitted any evidence for its submission that any composition having a pH as required in claim 1 would be disinfecting;

- the cited prior art did not contain any guidance which would have led the skilled person to modify the known compositions and to obtain the subject-matter of the contested patent in the attempt to solve the technical problem underlying the invention;

- therefore, the claimed subject-matter involved an inventive step.

IV. Claim 1 according to the main request reads as follows:

"1. A germicidal aqueous hard surface cleaning composition which comprises:
0.1 - 10% by weight of an acid sequestrant constituent;
0.1 - 10% by weight of a mixture of hydrophobic and hydrophilic solvents;
1 - 8% by weight of a surfactant providing a hydrotropic functionality;
0 - 20% by weight of one or more optional constituents;
the balance to 100% by weight, water
wherein the aqueous hard surface cleaning composition exhibits a pH of from 5.0 to 1.0; and wherein the mixture of hydrophobic and hydrophilic solvents

includes a hydrophobic solvent which is an organic solvent selected from: mineral spirits, tripropylene glycol n-butyl ether, propylene glycol phenyl ether, dipropylene glycol n-propyl ether, ethylene glycol phenyl ether, propylene glycol n-butyl ether, and dipropylene glycol n-butyl ether, and a hydrophilic solvent which is selected from: propylene glycol methyl ether, dipropylene glycol methyl ether, tripropylene glycol methyl ether, propylene glycol n-propyl ether, ethylene glycol n-butyl ether, diethylene glycol n-butyl ether, diethylene glycol methyl ether, propylene glycol, ethylene glycol, isopropanol, ethanol, methanol, ethylene glycol mono-butyl ether acetate, and diethylene glycol monoethyl ether acetate."

The dependent claims 2 to 7 relate to particular embodiments of the composition of claim 1.

V. An appeal was filed against this decision by the Opponent (Appellant).

The Appellant submitted with the statement of the grounds of appeal the following documents:

(8): US-A-4867898;
(9): Food Chemicals Codex; The National Academic Press, Washington D.C.: "Fenchyl Alcohol FEMA/No. 2480", page 562;
(10): U.S. Environmental Protection Agency: "Consumer Speciality Products Association (CSPA) "Germs" Letter of 5 January 2005;
(11): U.S. Environmental Protection Agency, DIS/TSS-1 Jan 22, 1982: "EFFICACY DATA REQUIREMENTS - Disinfectants for Use on Hard Surfaces";

(12): Experimental Data: Evaluation of Antimicrobial and Cleaning Efficacy (linked to the composition of document (2));

(13): Experimental Data: Evaluation of Antimicrobial and Cleaning Efficacy (linked to the composition of document (3)).

Furthermore, it submitted during the written procedure a corrected version of document (12), referred to as document (12a), and document (17): American Chemical Society (ACS) CAS Registry CAS-Number 112-34-5/ Diethylene glycol monobutyl ether.

The Respondent and Patent Proprietor submitted in writing amended sets of claims according to the first and to the second auxiliary requests and submitted the following documents:

(14): "Microbiology, An Introduction" by G.J.Tortora et al., fourth edition, 1992, page 168;

(15): "Foundations in Microbiology" by K.Talaro et al., 1993;

(16): "Disinfection, Sterilisation and Preservation" by Dr. S.S. Block, 1991, chapter 2, pages 18 to 21.

Oral proceedings were held before the Board on 30 September 2008.

VI. The Appellant submitted in writing and orally *inter alia* that

- the subject-matter of claim 1 according to the main request, which is a combination of claims 1, 5 and 7 as granted, amounts to a selection of features from at

least two lists; therefore claim 1 would contravene the requirements of Article 123(2) EPC;

- the term "germicidal" used in claim 1 and the term "disinfecting" used in the patent in suit have a very well defined and absolute meaning in the art as shown in documents (4), (10) and (11) and suggested in the patent in suit; these terms require that a composition kills microorganisms on at least 59 out of 60 carriers in the AOAC Use-Dilution Test Method, a known standard method prescribed by the U.S. Environmental Protection Agency (EPA) for evaluating the right of a composition to be labelled as disinfectant;

- if the terms "germicidal" and "disinfecting" were considered not to have a precise defined meaning, the borderline between a germicidal and a non germicidal composition would not be clear and the skilled person would not be able to determine without undue burden if a given composition fulfils the germicidal and disinfecting requirements of the patent in suit or not; therefore, the invention would not be sufficiently disclosed;

- it results from the experimental report submitted by the Respondent during the opposition proceedings (document (7a)) that not all the tested compositions comply with the performance requirements of the AOAC Use-Dilution Test Method; therefore, the invention does not work over the whole claimed scope;

- moreover, the invention does not show any technical advantage over the compositions of documents (8) and those of example 1 of document (2) and example II of

document (3), as shown in documents (12) or (12a) and (13), respectively;

- therefore, the technical problem solved by the invention of the patent in suit can only be formulated as the provision of an alternative hard surface cleaning composition;

- furthermore, if the technical problem underlying the invention were considered to encompass the provision of a germicidal activity which should not be necessarily that required by the AOAC Use-Dilution Test Method, this would imply that any composition able to kill at least one microorganism has to be considered to fulfil the germicidal requirements of claim 1;

- since any of the compositions disclosed in the cited prior art are at least to a certain extent disinfecting because of their low pH, also in this case the technical problem underlying the invention would have to be reformulated as the provision of an alternative hard surface cleaning composition;

- starting from any of the disclosures of documents (2), (3) or (8), it would have been obvious for the skilled person, looking for alternatives to these known compositions, to replace part or all of the organic solvents used in these documents with other known solvents and to arrive at the claimed subject-matter;

- therefore, the claimed subject-matter lacks an inventive step.

VII. The Respondent submitted in writing and orally *inter alia* that

- documents (9), (10) and (11) are documents published after the filing date of the patent in suit and not relevant to the issues of the appeal; documents (12a) and (17) are belated; therefore, all these documents should not be admitted into the proceedings;

- the wording of claim 1 according to the main request is supported by the original disclosure and does not amount to a selection of features from different lists; therefore, it does not contravene the requirements of Article 123(2) EPC;

- the terms "germicidal" and "disinfecting" are descriptive terms known in the art as shown in documents (14), (15) and (16), and do not require that the composition achieves a specific degree of antimicrobial activity as requested by the AOAC Use-Dilution Test Method; therefore, the objections raised by the Appellant concern rather the clarity of claim 1 than sufficiency of disclosure;

- the patent in suit explains how the claimed compositions can be prepared; therefore, the invention is sufficiently disclosed;

- the experimental report (7a) and the tests contained in the patent in suit show that different compositions falling within the scope of claim 1 all have germicidal activity and that the claimed subject-matter provides a solution to the technical problem addressed to in the patent in suit of providing hard surface cleaning

compositions having a disinfecting effect and the capacity of removing soap scum stains and hard water stains whilst minimizing the irritation of eyes, skin or mucous tissue;

- documents (2) and (3) do not concern the technical problem of providing hard surface cleaning compositions having germicidal activity whilst minimizing the irritation of eyes, skin or mucous tissue and are not suitable starting points for the evaluation of inventive step; to the contrary, document (8), dealing with the provision of a germicidal composition which also removes soap scum stains and hard water stains, deals with at least two of the partial technical problems addressed to in the patent in suit and represents a suitable starting point for the evaluation of inventive step;

- the skilled person, starting from the disclosure of document (8), would not have found any motivation for modifying the composition disclosed therein by replacing at least part of pine oil, which is an essential component for the effect described in that document, with one of the hydrophobic solvents required in claim 1 of the patent in suit; similarly, the skilled person would not have found any motivation in the prior art for modifying the compositions disclosed in documents (2) and (3) by using a mixture of solvents as required in the patent in suit in the attempt to solve the technical problem underlying the invention;

- the Appellant also did not submit any evidence that a skilled person would have expected any acidic composition having a pH as low as that of the

compositions disclosed in documents (2) and (3) to have a disinfecting effect;

- therefore, the claimed subject-matter involves an inventive step.

VIII. The Appellant requests that the decision under appeal be set aside and that the patent be revoked.

IX. The Respondent requests that the appeal be dismissed or, in the alternative, that the patent be maintained on the basis of the claims according to the first auxiliary request submitted with letter of 2 April 2007 or the second auxiliary request submitted with letter of 1 August 2008.

Reasons for the Decision

1. *Formal issues*

1.1 The Respondent contested the admissibility of documents (9), (10), (11), (12a) and (17), submitted by the Appellant for the first time during appeal (see point VII above).

The function of the appeal proceedings is mainly to give a judicial decision upon the correctness of the decision given by the department of first instance. Such a review can, in principle, only be based on the reasons already submitted before that department and it is normally not the function of a Board of Appeal to examine and decide upon issues which have been raised

for the first time during appeal proceedings (see G 10/91, OJ EPO 1993, 420, point 18 of the reasons).

On the other hand, by virtue of Article 114(1) EPC, the Boards have to examine the facts on their own motion when the facts are both alleged and properly substantiated by the parties.
When using these powers they can, however, exercise their discretion, conferred upon them by Article 114(2) EPC, to disregard facts and evidence which are not submitted in due time by the parties concerned (see also Case Law of the Boards of Appeal, 5th edition 2006, VII.D.6.4, pages 610 and 611 and RPBA Art. 12(4)).

When deciding whether a fact or piece of evidence was submitted in due time the Boards need to take into account the circumstances of the case, in particular whether the party concerned could have presented its case in an earlier phase of the proceedings or if it had good reasons for not doing so. Only if there are very special reasons for doing so, can a party introduce new facts and evidence at a late stage in the proceedings.

In exercising their power of discretion the Boards have to take into account on the one hand the public's as well as the parties' common interest that opposition proceedings should be speedily concluded, an interest that clearly encompasses appeal proceedings as well, and on the other hand the interest of the parties in presenting their case in a complete manner. The interest in a speedy procedure is best served if the patentee is made aware as soon as possible of the opponent's full and complete case, which he needs to

address, in order to keep his patent in force. Furthermore, it has to be taken into account the fact that the retention of information which could have been relevant to the maintenance of the patent at the opposition period and the introduction of such information at a later stage, i.e. by presenting the information "peacemeal wise" much later at the appeal proceedings, lead to a dilatory effect on the procedure and violate the interests of the public in general.

1.2 Document (9) was submitted with the statement of the grounds of appeal for explaining the physical characteristics of fenchyl alcohol, one of the components used in the composition disclosed in document (8), also a document cited with the statement of the grounds of appeal, the admissibility of which was not contested by the Respondent.

This document, bearing a datum of 1 January 2004, well after the priority date of the patent in suit, is an excerpt from the "Food Chemicals Codex", a list of known food additives, which illustrates in the present case the known physical qualities of fenchyl alcohol, a compound which was well known at that priority date; therefore, it also represents the common general knowledge of the skilled person about the qualities of this specific chemical component at the priority date of the patent in suit. Therefore, its information is considered as belonging to the prior art.

Furthermore, the Board holds that the information contained in this document is not one which could have taken the Respondent by surprise and could have led to a dilatory effect on the procedure since it has been

submitted for explaining a particular aspect of document (8), the admissibility of which was not contested.

Therefore, the Board decides to consider the content of this document.

1.3 Document (10) is a letter bearing a datum of 5 January 2005, well after the priority date of the patent in suit. Therefore, its disclosure cannot be considered to belong to the prior art.

Document (11), though bearing a datum of 22 January 1982, is a document retrieved on the Website of the U.S. EPA which was updated on 2 May 2006; since it has not been clarified which parts of the document were modified after the priority date of the patent in suit, this document cannot be considered to report a disclosure belonging to the prior art.

Since these documents are not part of the state of the art, there cannot be any interest of the parties or of the public for them to be considered in these proceedings.

Therefore, documents (10) and (11) are to be disregarded in this decision under Article 114(2) EPC 1973.

1.4 Documents (12a) and (17), which were submitted more than one year after the Respondent's reply to the statement of the grounds of appeal and about two months before oral proceedings, had been filed in order to

deal with some issues raised for the first time by the Respondent in its reply.

The principle of equal treatment of the parties and the interest of both parties to present all their arguments imposes that these documents are considered in the proceedings, in particular as they could be considered without any difficulty by the Board and by the Respondent.

Therefore, the Board finds that these documents are to be admitted (see also RPBA Art. 13(1)).

2. Main request

2.1 *Article 123(2) EPC*

Claim 1 consists in a combination of the features of claims 1, 5 and 7 as granted, which claims correspond to claims 1, 5 and 8 as originally filed.

In the original disclosure claim 5 depended directly on claim 1 so that the combination of the features of these claims was explicitly disclosed. Moreover, claim 8 was dependent on all the preceding claims. Therefore, there was also a disclosure of the feature of claim 8 in combination with those of claims 5 and 1.

The Board thus finds that the original documents contained an explicit disclosure of a combination of the features of claim 1 according to the main request, which combination thus cannot be considered to amount to a selection from different lists as argued by the Appellant.

Therefore, claim 1 according to the main request complies with the requirements of Article 123(2) EPC.

2.2 *Article 83 EPC 1973*

2.2.1 It is the established jurisprudence of the Boards of Appeal that the requirements of sufficiency of disclosure are only met if the invention as defined in the independent claim can be performed by a person skilled in the art in the whole area claimed without undue burden, using common general knowledge and having regard to further information given in the patent in suit (see decisions T 409/91, OJ EPO 1994, 653, point 3.5 of the reasons; T 435/91, OJ EPO 1995, 188, point 2.2.1 of the reasons).

As taught in the patent in suit a germicidal composition having cleaning and disinfecting properties can be prepared by using all the essential components of claim 1 and by adjusting the pH of the composition in the range required by the claim (see paragraphs 9 to 36).

2.2.2 As regards the terms "germicidal" and "disinfecting", used in the patent in suit in claim 1 and in the definition of the technical problem underlying the invention (paragraph 4), respectively, it has not been disputed that these terms were known to the skilled person. In fact, documents (14) (page 168: term "Germicide"), (15) (Paragraph "Germicides, Disinfection, Antisepsis", lines 1 to 9) and (16) (page 18, lines 1 to 6 below "Disinfectant" and page 21, lines 1 to 2 below "Germicide") show that the skilled person would

have understood that a germicidal composition or a composition having disinfecting properties is one able to kill microorganisms including most recognized pathogenic microorganism.

It has also not been disputed by the parties that there existed standard tests capable of assessing the ability of a composition to kill microorganisms and that some of these tests like, e.g., the AOAC Use-Dilution Test Method used in the patent in suit for evaluating the antimicrobial efficacy (paragraphs 68 and 69), were requested by authorities like the U.S. EPA in order to label commercialized compositions as "disinfectants" according to the specific regulations existing in that country. Document (4) also used such a test in relation to the definition of "disinfectant" (page 3, lines 3 to 9).

However, the patent in suit does not contain any indication that the words "disinfecting" or "germicidal" should be interpreted in relation to the results obtainable by the above mentioned test method, which had been used in the patent only for showing that the tested compositions had excellent disinfecting efficacy (page 13, line 56).

The Board thus finds that the patent in suit does not require that the composition claimed must show a specific minimum rate of germicidal or disinfecting activity, as submitted by the Appellant, and that the words "disinfecting" and "germicidal" are only descriptive terms.

2.2.3 In the Board's view the term "germicidal" in claim 1, similarly to the term "cleaning" also contained in the claim, outlines a quality of the claimed composition.

Therefore, this term only requires that the composition, when properly used, should be able to kill microorganisms (in the specific case on a hard surface) without implying any restriction as to the extent of killing, which effect, however, should be consistent enough to be recognisable by the skilled person by means of standard methods of control.

Therefore, the Board cannot agree with the Appellant's submission that in such a case the term "germicidal composition" would encompass any composition able to kill a **single** microorganism, since such a minimal effect would not be sufficient for being recognisable by the skilled person as a "germicidal or disinfecting effect" by using standard methods of control; to the contrary, such a composition would be classified as not having disinfecting properties.

Moreover, it is undisputed that a skilled person would have easily recognised if the composition prepared has a disinfecting effect by using standard methods of control. Since the patent in suit does not require any minimum level of disinfecting there is also not a quantitative borderline at which the skilled person would have to decide if a composition falls under the scope of the claim or not.

2.2.4 In the Experimental Report (7a) various compositions having all the essential components of claim 1 and a pH according to the claim were tested for their ability to

kill Staphylococcus aureus according to a variant of the AOAC Use-Dilution test Method by using only 10 instead of 60 substrates. All these compositions show a 100% disinfecting performance of 0/10 (10 complete killings out of 10) with the exception of the compositions of test 3 at pH 4.95 and of test 4 at pH 5.0 showing a performance of 1/10 and that of test 6 at pH 4.99 showing a performance of 4/10. However, also in these three cases the disinfecting effect exceeds the 50% of the substrates tested so that all compositions can be considered to have a considerable disinfecting effect that would be recognised by the skilled person.

Therefore, this experimental report confirms that the skilled person would be able to reproduce the invention without undue burden by following the teaching of the patent in suit.

The Board concludes that the invention is sufficiently disclosed.

2.3 *Novelty*

The decision of the department of first instance that the claimed subject-matter is novel over the cited prior art (see point III above) has not been contested by the Appellant.

2.4 Inventive step

2.4.1 The invention of claim 1 relates to a germicidal aqueous hard surface cleaning composition having a pH of from 5.0 to 1.0.

As explained in the description of the patent in suit, various hard surface cleaning agents had been produced and were known in the art. For example, highly acidic cleaning agents comprising strong acids, such as hydrochloric acid, had been found useful in the removal of hard water stains; however, the presence of strong acids was known to be an irritant to the skin and to be a potential toxicological danger. Also, few compositions provided any germicidal or sanitizing effect to the treated hard surfaces (paragraph 2).

Therefore, the technical problem underlying the invention is formulated in the patent in suit as the provision of improved cleaning compositions which are effective in providing a disinfecting effect and facilitate the removal of soap scum stains and hard water stains from hard surfaces, thereby showing minimal irritability to the eyes, skin or mucous tissues (paragraph 4).

The Board has no doubt that the combination of these technical problems reflects the real goal of the invention as the examples of the patent in suit try to show the superiority of the claimed compositions in terms of removal of soap scum stains and hard water stains from hard surfaces (paragraphs 48 and 49), of reduced irritability to the eyes, skin or mucous tissues (paragraphs 60, 63, 65 and 66) and of antimicrobial efficacy (paragraphs 68, 69).

2.4.2 The most suitable starting point to be selected for assessing inventive step of a claimed subject-matter is, according to the jurisprudence of the Boards of Appeal of the EPO, not a subject-matter (in the present case a

composition) having the most possible number of features in common with the claimed one but, if possible, a technically realistic starting point contained in a document dealing with the same or similar technical problem as the claimed invention and disclosing a subject-matter having a similar use and effect as the subject-matter claimed in the patent in suit (see Case Law of the Boards of Appeal of the EPO, 5th edition 2006, points I.D.3.1 to I.D.3.3 on pages 121 to 123).

Document (8) concerns the provision of a pine oil hard surface cleaner having a broad spectrum disinfecting effect, not containing quaternary ammonium compounds which are highly irritating to the skin, eyes etc., being safe for the consumer and having cleaning efficacy on soap scum soils (column 1, lines 5 to 27, column 2, lines 32 to 36); therefore, it deals with similar technical problems as all those addressed to in the patent in suit and qualifies as a suitable starting point for the evaluation of inventive step.

To the contrary, documents (2) and (3) deal explicitly only with one of the technical problems addressed to in the patent in suit. In particular, document (2) deals only with the technical problem of providing an improved hard surface cleaner for glass or ceramic surfaces having excellent cleaning performance, for example on soap scum, and a streak-free drying effect (page 2, lines 22, 23, 36 to 39 and page 5, lines 15 to 17) whilst document (3) deals with that of providing hard surface cleaning compositions providing removal of soap scum and hard water deposits (page 1, lines 17 to 20).

These two documents are silent about the possible disinfecting activity and irritability to the skin, eyes or mucous tissues of the disclosed compositions. The Appellant's allegation that the compositions of document (2) and (3) would be recognised by the skilled person to have disinfecting properties because of their acidic pH and the presence of citric acid which is known to have a disinfecting activity (see document (2), example 1 and document (3), claim 1 and example II), has been contested by the Respondent and has not been supported by the submission of any evidence.

The Appellant referred to the acidic compositions of document (8), which are disinfectant and contain organic acidic sequestering agents (column 1, lines 24 to 32). However, this document cannot be considered to be an evidence that acidic compositions were known to have disinfecting properties or that acidic sequestering agents were known at the priority date of the patent in suit to provide disinfecting properties to a composition since it explicitly teaches that the organic sequestering acids had not been used before as a component of a disinfectant cleaning composition and that the obtained disinfecting effect was considered to be a true synergistic effect, i.e. to be an unexpected effect, obtained because of the combination of pine oil and organic acidic sequestering agent, which combination is not present in documents (2) and (3) (see document (8), column 2, lines 11 to 20).

The Appellant referred also to document (4) disclosing disinfectant compositions which have an acidic pH and may also comprise, e.g., citric acid (claim 1, pages 18

to 19 and page 15, lines 13 to 22). However, this document requires the presence of a specific antimicrobial agent which is a carboxylic acid system consisting of octanoic acid, i.e. an organic acid which is not a sequestering agent (claim 1 and page 9, lines 4 to 5); moreover, citric acid is used as alternative to other not sequestering acids only for adjusting the pH of the composition in order to achieve an optimal antimicrobial efficacy (page 15, lines 15 to 22) but not for providing by itself additional disinfecting properties to those already provided by the octanoic acid. Therefore, also this document cannot be considered to be evidence that acidic compositions were known at the priority date of the patent in suit to have disinfecting properties or that acidic sequestering agents were known to provide disinfecting properties to a composition.

Since the Appellant did not bring any evidence in support of its allegation, the Board can only conclude that the skilled person would not have considered the compositions of documents (2) and (3) to have disinfecting properties and thus he would not have considered these documents to deal with the technical problem of providing a disinfecting hard surface cleaner.

Therefore, documents (2) and (3) are not suitable starting points for the evaluation of inventive step and could have been selected as starting point only by using hindsight, having already knowledge of the invention.

Finally, document (4), cited in the decision under appeal as possible starting point, is also less suitable than document (8) as starting point, as it concerns only the provision of a composition, e.g. a hard surface cleaner, having disinfecting activity without the risk of food or environmental contamination and it does not deal with the other partial technical problems addressed to in the patent in suit (see page 6, lines 18 to 21 and page 7, lines 14 to 17).

The Board concludes that document (8) is the most appropriate starting point for the evaluation of inventive step.

2.4.3 The technical problem underlying the invention, seen in the light of document (8), is the provision of an alternative hard surface cleaner composition providing a disinfecting effect and removal of soap scum stains and hard water stains whilst minimizing the irritability to eyes, skin or mucous tissue.

As shown in the patent in suit, the claimed compositions have a better cleaning efficiency in the removal of soap scum stains and hard water stains than the commercial formulation "Comet® Bathroom Cleaner" (see table 4, figure 1 and paragraphs 54 and 56) or similar compositions not comprising the acidic sequestrant constituent (and thus having a higher pH), or not comprising the required mixture of hydrophobic and hydrophilic solvents or a surfactant providing a hydrotropic functionality (see table 1, example 8; tables 2 and 5); furthermore, the compositions according to the invention show minimal irritation to eyes, skin and mucous tissues (paragraphs 59 to 67) and

an excellent disinfecting performance (table 6); as explained hereinabove (point 2.2.4), also the experimental report (7a) shows that all the tested compositions according to claim 1 have a disinfecting effect.

Therefore, the Board finds that the technical problem underlying the invention has been convincingly solved by means of a composition according to claim 1.

2.4.4 The compositions disclosed in document (8) comprise 1 to 30% of pine oil, which is a hydrophobic solvent as suggested in document (3) (page 6, line 10 in combination with page 8, line 11); 0.05 to 5% of an oil soluble organic acid which can be an acidic sequestering agent; 0.1 to 10% of isopropanol, which is one of the hydrophilic solvents belonging to the class of solvents required by claim 1 of the patent in suit; 0.01 to 2% of fenchyl alcohol, which contrary to the Appellant's submission, cannot be considered to be a hydrophobic solvent since it is not liquid at room temperature but it exists in crystalline form (see document (9), page 562, "fenchyl alcohol", third column); 0.01 to 1% of ammonium hydroxide; 0.01 to 2% of ethylene diamino tetraacetic acid, another acidic sequestering agent; various optional components such as 0.1 to 10% of sodium dodecyl benzene sulfonate, a surfactant having hydrotropic functionality; the balance being water. The pH of the compositions is between 0 and 6 (see column 1, lines 28 to 31; table I).

Therefore, these compositions differ from that of claim 1 according to the patent in suit principally insofar as they do not comprise from 0.1 to 10% of a

mixture of hydrophobic and hydrophilic solvents containing a hydrophobic solvent selected from mineral spirits, tripropylene glycol n-butyl ether, propylene glycol phenyl ether, dipropylene glycol n-propyl ether, ethylene glycol phenyl ether, propylene glycol n-butyl ether, and dipropylene glycol n-butyl ether.

Moreover, the compositions of document (8) do not necessarily comprise 1 to 8% by weight of a surfactant providing a hydrotropic functionality, may comprise more than 10% by weight of the mixture of hydrophilic and hydrophobic solvents because of the possible presence of up to 30% of pine oil, may comprise more than 20% of optional components and do not have necessarily a pH between 1 and 5.

2.4.5 As the compositions of document (8) are based on pine oil and require the presence of the combination of pine oil and an oil soluble organic acid which can be a sequestering agent for obtaining the desired synergistic effect (column 2, lines 11 to 15), it does not contain any hint that would have prompted the skilled person to replace part of the pine oil or to add limited amounts of other hydrophobic solvents within the compositional limits required in the patent in suit in order to provide an alternative composition having a disinfecting effect, being capable of removing soap scum stains and hard water stains from hard surfaces and showing minimal irritability to the eyes, skin or mucous tissues; moreover, the compositions of document (8) do not require the presence of a surfactant having a hydrotropic functionality, which is only one of the various optional components of the compositions described therein, which hydrotropic

surfactant is to the contrary essential in the invention of the patent in suit for obtaining a good cleaning efficacy, as explained above (point 2.4.3).

Therefore, the teaching of document (8) would not have led the skilled person to the subject-matter of claim 1 of the patent in suit.

2.4.6 Moreover, the skilled person, looking for alternatives to the composition of document (8), would not have found any reason for taking into consideration any of the compositions disclosed in documents (2) and (3), since these documents relate to hard surface cleaners capable of removing soap scum stains and hard water stains which, as explained hereinbefore, would have not been considered by the skilled person to have any disinfecting properties or to be capable of providing minimal irritation to the eyes, skin or mucous tissues.

Since documents (2) and (3) are not relevant for the evaluation of inventive step, there is no need to discuss the results of the experimental data (12) and (13) and the relevance of documents (12a) and (17), related to document (12), which documents concern only the reworking of some examples of documents (2) and (3) and their possible influence upon the evaluation of inventive step.

Therefore, the Board finds that the cited prior art did not contain any guidance which would have led the skilled person to a composition having the whole combination of features of claim 1 in the attempt to solve the technical problem underlying the invention of providing alternative cleaning compositions which are

effective in providing a disinfecting effect and facilitate the removal of soap scum stains and hard water stains from hard surfaces, thereby showing minimal irritability to the eyes, skin or mucous tissues.

The subject-matter of the claims according to the main request thus involves an inventive step.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Rauh P.-P. Bracke