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**Datasheet for the decision
of 21 December 2005**

Case Number: T 0048/02 - 3.3.07

Application Number: 93301588.5

Publication Number: 0613678

IPC: A61K 7/20

Language of the proceedings: EN

Title of invention:
Oral care composition

Patentee:
Micropure, Inc.

Opponent:
The Procter & Gamble Company

Headword:

-

Relevant legal provisions:
EPC Art. 100(c), 123(2) and (3)
EPC R. 88

Keyword:
"Correction under Rule 88 - not allowable"
"Extension of protection - yes (main request, auxiliary requests 1A and 2" - not allowable)"
"Added subject-matter - yes (auxiliary request 3 - not allowable)"

Decisions cited:
G 0001/93, T 0824/00, J 0019/03

Catchword:

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Case Number: T 0048/02 - 3.3.07

D E C I S I O N
of the Technical Board of Appeal 3.3.07
of 21 December 2005

Appellant:
(Patent Proprietor)

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted 12 November 2001
revoking European patent No. 0613678 pursuant
to Article 102(1) EPC.**

Composition of the Board:

Chairman: S. Perryman
Members: B. Struif
B. ter Laan

Summary of Facts and Submissions

I. The appeal lies against the decision issued 12 November 2001 of the opposition division to revoke European patent No. 0 613 678 (granted on European patent application No. 93 301 588.5 filed on 2 March 1993).

II. (a) As originally filed on application, claim 1 read:

"1. A composition for preventing and treating dental disease by reducing the number of micro-organisms in the mouth, said composition comprising an oral health preparation selected from the group consisting of a mouthwash and a dentifrice, wherein the oral health preparation contains stabilized chlorine dioxide in a concentration in the range of between about 0.005% - 0.5% and a phosphate compound in a concentration in the range of between about 0.02% - 3.0% to retard escape of chlorine dioxide from the composition at a pH in the range of 6.0 to 7.4, thereby increasing the shelf life and efficacy of the composition."

(b) On 23 June 1994 a new set of eleven claims was filed of which the independent claims 1 and 9 read:

"1. A composition in the form of a dentifrice or mouthwash for preventing and treating dental disease by reducing the number of micro-organisms in the mouth, said composition having a pH from 6.0 to 7.6 and comprising:

(i) stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5%; and

(ii) a phosphate compound in a concentration in the range of 0.02% - 3.0% to retard escape of chlorine dioxide from the composition thereby increasing the shelf life and efficacy of the composition."

9. Use of a phosphate compound at a concentration in the range of 0.2% to 3.0% to retard escape of chlorine dioxide from a mouthwash or dentifrice composition having a pH of from 6.0 to 7.6 and containing 0.005% to 0.5% by stabilised chlorine dioxide."

The accompanying letter stated that the new claims 1 and 9 were based on claim 1, page 14, first paragraph and Table 1 as originally filed.

(c) The examining division issued a communication dated 2 December 1996 under Rule 51(4) EPC indicating that it intended to grant a European patent on the basis of the text then on file, including the above claims 1 and 9.

(d) By a submission filed 3 April 1997 further amendments were requested to the claims and description. For ease of comparison the changes relating to claims 1 and 9 have been indicated below with omissions struck through, and additions in italics and underlined:

"1. A composition in the form of a dentifrice or mouthwash for preventing and treating dental disease by reducing the number of micro-organisms

in the mouth, said composition ~~having a pH from 6.0 to 7.6~~ and comprising:

(i) stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5% by volume based on the total volume of the composition; and

(ii) a stabiliser comprising a phosphate compound in a concentration in the range of 0.02% - 3.0% by volume to retard escape of chlorine dioxide from the composition thereby increasing the shelf life and efficacy of the composition."

9. Use of a phosphate compound at a concentration in the range of ~~0.2%~~ 0.02% to 3.0% by volume as a stabilizer to retard escape of chlorine dioxide from a mouthwash or dentifrice composition ~~having at~~ a pH of from 6.0 to ~~7.6~~ 7.4 and containing 0.005% to 0.5% by volume stabilised chlorine dioxide."

On page 1 of the submission it was stated as regards the introduction of references to percentages by volume in the claims, that "The amount of phosphate and chlorine dioxide referred to in the claims relate to percentages by volume, as is readily apparent to a skilled person, and this has been clarified in the amended claims."

(e) The patent was granted with claims 1 and 9 in the form set out in paragraph (d) above without the examining division issuing any communication commenting on or raising objections to the amendments requested in the submission filed 3 April 1997.

III. Two notices of opposition were filed against the granted patent, in which revocation of the patent in its entirety was requested on the grounds of lack of novelty (opponent 1), lack of an inventive step (both opponents) and insufficient disclosure (opponent 1) according to Article 100, paragraphs (a) and (b) EPC, respectively. A ground of opposition under Article 100, paragraph (c) EPC was raised by opponent 1 after the expiry of the opposition term. By letter dated 7 July 2000 opponent 2 withdrew its opposition. During opposition *inter alia* the following documents were cited:

D1: US-A-4 574 084

D2: US-A-3 271 242

D11: Roberta R. Ratcliff, deposition made in United States infringement proceedings concerning US patents relating to subject-matter similar to the present European Patent.

IV. The main request before the opposition division related to the claims as granted, which included independent claims 1 and 9 (see also point II, paragraph d) above) reading:

"1. A composition in the form of a dentifrice or mouthwash for preventing and treating dental disease by reducing the number of micro-organisms in the mouth, said composition comprising:

(i) stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5% by volume based on the total volume of the composition; and

(ii) a stabiliser comprising a phosphate compound in a concentration in the range of 0.02% - 3.0% by volume to retard escape of chlorine dioxide from the composition thereby increasing the shelf life and efficacy of the composition."

9. Use of a phosphate compound at a concentration in the range of 0.02% to 3.0% by volume to retard escape of chlorine dioxide from a mouthwash or dentifrice composition at a pH of from 6.0 to 7.4 and containing 0.005% to 0.5% by volume stabilised chlorine dioxide."

The opposition division admitted into the proceedings for its relevance the objection under Article 100(c) EPC in relation to the claimed concentration range of stabilized chlorine dioxide. It found that there was no explicit mention in the description as originally filed for the specification of this concentration range being by "volume based on the total volume of the composition" nor to the specification with respect of the concentration range of phosphate being "by volume".

Furthermore, inspection of the examples did not allow any conclusion as to whether the concentration range of stabilized chlorine dioxide given in % was to be referred to the total volume of the composition or not. Moreover, the skilled person would seriously contemplate other possibilities such as based on the basic composition instead of the final composition, and the corresponding alternatives "by weight". It could not be derived directly from the application as filed whether the concentration of stabilized chlorine dioxide was measured by weight or volume. Among the

materials to be used as starting materials was mentioned "Purogene (2% chlorine dioxide)" (cf. page 13, line 10 of the patent specification), but this piece of information did not allow one to conclude that the "composition in the form of a dentifrice or mouthwash" as claimed in claim 1 comprised a stabilized chlorine dioxide in "a concentration in the range of 0.005% - 0.5% by volume based on the total volume of the composition".

The specification of the concentration range of the phosphate compound as "by volume" was unusual having regard to the fact that the phosphate compound was a solid. Additionally, this specification "by volume" might very well refer to the volume of either the basic composition or the final composition. Insofar, the said expression introduced an information "by volume" instead of "by weight" which could not be derived from the application as filed.

The opposition division decided that the above analysis also applied to the use claim 9 and other claims. Therefore the claims as granted incorporated subject-matter which was not directly and unambiguously derivable from the application documents as originally filed, and the main request was to be rejected since its subject-matter extended beyond the contents of the application as originally filed (Article 100(c) EPC).

- V. The first auxiliary request before the opposition division comprised amended claims, including the following, where omissions compared to the claims as granted are shown struck through, and additions are shown underlined and in italics:

"1. A composition in the form of a dentifrice or mouthwash for preventing and treating dental disease by reducing the number of micro-organisms in the mouth, said composition comprising:

(i) stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5% (50 - 5000 ppm) ~~by volume based on the total volume of the composition;~~ and

(ii) a stabiliser comprising a phosphate compound in a concentration in the range of 0.02% - 3.0% weight by volume to retard escape of chlorine dioxide from the composition in the absence of a peroxy compound at a pH of 6.0 to 7.4 thereby increasing the shelf life and efficacy of the composition, with the proviso that the composition is not a mouthwash having 0.1 % (1000 ppm) stabilized chlorine dioxide and 0.2% weight by volume of trisodium phosphate."

9. Use of a phosphate compound at a concentration in the range of 0.02% to 3.0% weight by volume as a stabilizer to retard escape of chlorine dioxide from a mouthwash or dentifrice composition in the absence of a peroxy compound at a pH of from 6.0 to 7.4 said composition containing 0.005% to 0.5% (50 - 5000 ppm) ~~by volume~~ stabilised chlorine dioxide."

The opposition division held that in claim 1 the deletion of "by volume based on the total volume of the composition", and in claim 9 the deletion of "by

volume", as specification of the range of the percentages for the concentration of the stabilised chlorine dioxide lead to an extension of the protection conferred, since now the claims encompassed compositions (and their uses) having other concentration values than those granted and which did not fall within the granted scope but were more broadly defined. Further, the introduction of the range in ppm in brackets did not correspond to a restriction but also broadened the scope, since ppm was a relative and not an absolute term and no reference was given (by weight, by volume or based on the total or partial compositions).

The opposition division also held that the introduced feature of "in the absence of a peroxy compound" in claims 1 and 9 by way of disclaimer to re-establish novelty over D1, and of the proviso at the end of claim 1 by way of disclaimer to re-establish novelty over D11 contravened Article 123(2) EPC, as such disclaimers would only be justifiable over accidental disclosures which would not be relevant when considering inventive step, whereas D1 and D11 remained relevant for this.

The proviso "in the absence of a peroxy compound" further was unclear and seemed to be in contradiction with the teaching of the patent, so that Article 84 EPC was not complied with.

The opposition division thus rejected the first auxiliary request as not meeting the requirements of Article 123(2) and (3) as well as Article 84 EPC.

- VI. The second auxiliary request before the opposition division comprised a claim 1 identical to claim 9 of the first auxiliary request, and thus this request too was rejected by the opposition division as not meeting the requirements of Articles 123(2) and 3 and Article 84 EPC, as the same objections applied to its claim 1 as applied to claim 9 of the first auxiliary request.
- VII. On 11 January 2002, the proprietor (appellant) filed a notice of appeal against the above decision, the prescribed fee being paid on the same day. The statement setting out the grounds of appeal was filed on 19 March 2002.
- VIII. By letter of 20 October 2005, in response to a communication of the board, the appellant submitted three new sets of claims (auxiliary requests 1 to 3) and requested further amendments to those requests in the form of incompletely formulated requests 4 to 6. Moreover, further documents were cited *inter alia*:
- D14: Bio-Cide International Corporate Offices
"Purogene" product information, www.bio-cide.com, 2 pages.
- IX. By letter of 21 October 2005, the appellant submitted a declaration of an expert witness, Dr. William Cooley, (D17) dated 21 October 2005. This contained *inter alia* the following passages:
- "...
2. In all my extensive experience of working in the field of oral hygiene products, the industry

standard for the measurement of concentrations of compounds forming parts of toothpaste has always been (and remains to this day) the concentration in terms of weight, for example percent by weight.

3. Hence it is my opinion that a person working in the field of mouthwashes would always read the term "percent" given in relation to a concentration of an ingredient of such products as "percent by weight".

4. Furthermore it is my opinion that the skilled person on seeing the use of percent by volume to describe the concentration of a solid such as phosphate or stabilized chlorine dioxide, would assume that a mistake had been made and that percent by weight was the intended measurement.

5. My opinion is supported by the United States Code of Federal Regulations in relation to labelling requirements for over the counter drugs...."

X. Oral proceedings were held on 21 December 2005. At the oral proceedings, the appellant submitted a corrected main request (claims 1 to 12) corresponding to claims 1 to 12 filed as auxiliary request 1 on 20 October 2005, and an amended set of claims 1 to 10 as auxiliary request 1A.

XI. Claims 1 and 9 of the main request are as set out below with omissions compared to the claims as granted shown struck through, and additions shown underlined and in italics:

"1. A composition in the form of a dentifrice or mouthwash for preventing and treating dental disease by reducing the number of micro-organisms in the mouth, said composition comprising:

- (i) stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5% weight by volume based on the total volume of the composition; and
- (ii) a stabiliser comprising a phosphate compound in a concentration in the range of 0.02% - 3.0% weight by volume to retard escape of chlorine dioxide from the composition at a pH of from 6.0 to 7.4 thereby increasing the shelf life and efficacy of the composition."

"9. Use of a phosphate compound at a concentration in the range of 0.02% to 3.0% weight by volume as a stabiliser to retard escape of chlorine dioxide from a mouthwash or dentifrice composition at a pH of from 6.0 to 7.4, said composition containing 0.005% to 0.5% weight by volume stabilised chlorine dioxide."

XII. Claims 1 and 7 of auxiliary request 1A are as set out below with omissions compared respectively to the claims 1 and 9 as granted shown struck through, and additions shown underlined and in italics:

"1. A composition in the form of a dentifrice or mouthwash for preventing and treating dental disease by reducing the number of micro-organisms in the mouth, said mouthwash composition comprising:

- (iii) stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5% weight by volume based on the total volume of the composition; and
- (iv) a stabiliser comprising a phosphate compound in a concentration in the range of 0.02% - 3.0% weight by volume to retard escape of chlorine dioxide from the composition at a pH of from 6.0 to 7.4 thereby increasing the shelf life and efficacy of the composition;

or said dentifrice composition comprising:

- (v) stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5% weight by volume based on the total volume of the composition; and
- (vi) a stabiliser comprising a phosphate compound in a concentration in the range of 0.02% - 3.0% weight by weight to retard escape of chlorine dioxide from the composition at a pH of from 6.0 to 7.4 thereby increasing the shelf life and efficacy of the composition."

"7. Use of a phosphate compound at a concentration in the range of 0.02% to 3.0% weight by volume in a mouthwash and 0.02 to 3.0% weight by weight in a dentifrice as a stabiliser to retard escape of chlorine dioxide from a the mouthwash or dentifrice composition at a pH of from 6.0 to 7.4, said composition containing 0.005% to 0.5% weight by volume stabilised chlorine dioxide."

XIII. The other auxiliary requests remained as submitted with letter of 20 October 2005.

Auxiliary request 1 corresponds to the main request.

Auxiliary request 2 has a claim 1 corresponding to claim 1 of the main request but with the words "or mouthwash" deleted.

Auxiliary request 3, has a claim 1 corresponding to claim 9 as granted (see point IV above)

Auxiliary request 4 amounts to four different requests, corresponding to the main request, auxiliary request 1A, auxiliary request 2, and auxiliary request 3 each modified by replacing the term "stabilizer" in claim 1 and the respective independent use claim by the term "activating inhibitor".

Auxiliary request 5 amounts to eight different requests, corresponding to the main request, auxiliary request 1A, auxiliary request 2, and auxiliary request 3, and the four requests of auxiliary request 4, each respectively modified so that the independent claims are additionally limited to a phosphate selected from mono- or dibasic sodium phosphate, or trisodium phosphate.

Auxiliary request 6 amounts to eight different requests, corresponding to the main request, auxiliary request 1A, auxiliary request 2, and auxiliary request 3, and the four requests of auxiliary request 4, each modified so that all claims are limited to trisodium phosphate.

XIV. The appellant argued in substance as follows:

- (a) The main request involved corrections under Rule 88 EPC. According to the examples as filed, stabilized chlorine dioxide was used in the form of "Purogene" which was a solid sodium chlorite as shown in the product specification of "Purogene" (D14). Thus, a 2 % solution of Purogene would be understood by the skilled person to be 2 g of sodium chlorite in 100 ml aqueous solution. Furthermore, the indication of a concentration by "weight by volume" was in accordance with industrial standards. The final concentration of the exemplified compositions referred to 100 ml and thus to a volume basis. Similar arguments applied to the phosphate which was a solid and was used in example 1 of the application as filed in % by weight based on the total volume of the composition. Since both ingredients of the compositions were solids, the skilled person would immediately recognize that a mistake had been made. In addition, it was immediately evident that nothing else would have been intended than what was offered as the correction. Thus, the corrected concentration "% weight by volume" was admissible.
- (b) The amendment of feature (i) in claim 1 of the main request, auxiliary request 1A and auxiliary requests 1 and 2 was based on example 1 of the application as filed, from which it could be derived that the stabilized chlorine dioxide referred to solid sodium chlorite in 100 ml solution. Thus, that amendment was allowable under Article 123(2) EPC.

As regards the phosphate concentration in feature (ii) of claim 1, the opposition division had already accepted the proposed amendment as allowable (Article 123(2) EPC). Furthermore, the concentrations of the phosphate indicated in the examples showed that the indication "by weight" was correct. This was confirmed by D17. Thus, the amendments were allowable under Article 123(2) EPC.

Furthermore, the amendment narrowed the scope of protection and hence claim 1 met the requirements of Article 123(3) EPC.

- (c) Claim 1 of auxiliary request 3 was identical to claim 9 as granted. The term "stabiliser" used in claim 1 of auxiliary request 3 was derivable from the application as filed. Furthermore, the concentrations referred to "% by volume" could be derived from example 1 of the application as filed. Any clarity objections which might arise with respect to those terms should be disregarded, since clarity was no opposition ground under Article 100 EPC.

- (d) With respect to auxiliary requests 4 to 6, the appellant relied essentially on his submissions concerning the main request and auxiliary requests 1A and 1 to 3, the modifications introduced in the requests forming auxiliary request 4 being made in case the Board considered that there was no basis for the phrase "stabiliser comprising a phosphate compound", and the modifications introduced in the requests forming

auxiliary request 5 and 6 serving to restrict the claims to distinguish the subject-matter claimed therein further from the prior art.

XV. The arguments of the opponent (respondent), can be summarized as follows:

- (a) In granted claim 1 the term "% by volume based on the total volume of the composition" for defining the concentration of the stabilized chlorine dioxide was not an evident error, since chlorine dioxide was a gas and the total content thereof could refer to 100 % by volume. Furthermore, there were four alternatives to correct the percentage of the stabilized chlorine dioxide so that it was not immediately evident that the proposed correction was the only possible one.
- (b) The percentage of phosphate in the dentifrice referred to "weight", but not to "volume" as was stated by D17 so that the correction was not evident. Thus, the requirements of Rule 88 EPC were not fulfilled.
- (c) The limitation in granted claim 1 to the term "by volume" for the concentrations of phosphate and chlorine dioxide was not disclosed in the application as filed. The same objection applied to the term "based on the total volume of the composition". Furthermore, the term "stabiliser" mentioned in granted claims 1 and 9 was not disclosed in the application as filed. The amended feature "% **weight** by volume" (emphasis added) in the claims of the main request would not overcome

the above deficiencies in the claims since there was no basis for that amendment in the application as filed. Thus, the claimed subject-matter of the corrected main request did not meet the requirements under Article 123(2) EPC. Furthermore, the amended feature "% weight by volume..." resulted in an extended protection (Article 123(3) EPC).

- (d) Since the amendments to feature (i) of claim 1 in auxiliary requests 1A, 1 and 2 were identical to those in claim 1 of the main request, the same arguments as brought forward with respect to the main request applied *mutatis mutandis* (Article 123(2) and (3) EPC).

- (e) Claim 1 of auxiliary request 3 corresponded to claim 9 as granted. However, that claim had no basis in the application as originally filed. The appellant failed to show the basis for each of the claimed features, in particular for the terms "% by volume" and "stabiliser". Since the concentrations of essential components of a composition always had a technical meaning, the present undisclosed limiting features were not allowable (decision G 1/93 (OJ EPO, 1994, 541)).

In addition, example 1, on which the appellant relied, related to a solution and not to a dentifrice so that it could not provide a basis for the term "% by volume" for the dentifrice of claim 1 of auxiliary request 3.

(f) The additional amendments according to auxiliary requests 4 to 6 were not suitable to overcome the objections under Article 123(2) and (3) EPC.

XVI. The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request or auxiliary request 1A submitted at the oral proceedings on 21 December 2005, or of one of auxiliary requests 1 to 6 submitted on 20 October 2005.

XVII. The respondent requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible

Main Request

Rule 88 EPC

2. The appellant seeks to justify the amended claims of the main request, by asking for a correction under Rule 88 EPC. This reads "Linguistic errors, errors of transcription and mistakes in any document filed with the European Patent Office may be corrected on request. However, if the request for such correction concerns a description, claims or drawings the correction must be obvious in the sense that it is immediately evident that nothing else would have been intended than what is offered as the correction".

2.1 In the case law of the Boards of Appeal (see for example decisions T 824/00, point 6 of the reasons, OJ

EPO 2004, 005 and J 19/03 of 11 March 2005, point 3. of the reasons), correction under Rule 88, first sentence EPC, if allowed, has a retroactive effect with the consequence that the document containing the error has to be regarded as if it was filed in the corrected form (so called *ab initio* effect). Rule 88 EPC thus acknowledges as a legal procedural value the desirability of having regard to true as opposed to ostensible party intentions in legal proceedings in appropriate circumstances, but this must be balanced against legal and procedural certainty and the legitimate interests of the public. Thus the case law reads Rule 88, first sentence EPC as conferring a discretion on the competent instance of the EPO to allow or not to allow a correction of an error since it is only stated in this rule that a respective error "may be corrected". Moreover, the fact that the provision is framed as a discretionary power in a rule rather than as an article is evidence that the principle underlying Rule 88, first sentence EPC is seen as a subordinate one which should not prevail in a serious conflict with other values underlying the articles of the EPC such as procedural certainty or legitimate interests of the public.

- 2.2 Rule 88 EPC is a provision which allows an allegedly incorrectly formulated claim to be corrected only in very special circumstances. Thus Rule 88 EPC requires that the applicant or proprietor persuade the instance of the EPO concerned (1) that there is an error in the sense of something not intended in the documents filed at the EPO (2) that it is immediately evident that nothing else would have been intended than what is offered as the correction of the claim and (3) to exercise its discretion in favour of the correction sought.

2.3 The appellant has not directly addressed the question of whether an error occurred, but seems to ask the Board to infer this from the amendments made to the claims allegedly not being in conformity with the description or usual practice in the field of toothpastes and mouthwashes. The present facts are far from a situation where both the error and its correction can be considered as self-evident (for example such as a reference to "red laser light of wavelength 694 nm", where it is immediately evident to the skilled person that nanometres and not millimetres must be meant), and the correction is allowable because the skilled person would have no doubt as to what was intended.

2.4 Here the prosecution history (see point II, paragraph (d) above) does not in any way suggest that the documents submitted do not reflect the appellant's intentions.

2.5 Further in the field of dentifrices and mouthwashes, where many users judge the quantity to be used at any one time by eye, that is by volume, giving the concentrations of stabilized chlorine dioxide and phosphate compound by percent by volume in the case of an invention in which the number of micro-organisms in the mouth is to be reduced by release of chlorine dioxide as a gas, has for the Board sufficient plausibility not to be treated as an immediately evident error.

2.6 The evidence of the expert witness in D17 (see point IX above) submitted on behalf of the appellant, can be

accepted by the Board to the extent that he says that it was the industry standard for measuring concentrations of compounds forming parts of toothpaste, to do so by percent by weight, and that the United States Code of Federal Regulations in relation to labelling requirements for over the counter drugs also required this. However this cannot be relied on to treat the claims as granted as containing evident errors because there can be no presumption that the appellant was seeking to conform either with this industry standard or the United States Code of Federal Regulations when putting forward these claims. Also it seems more doubtful whether for mouth washes percent by weight was usual.

- 2.7 A method of making stabilized chlorine dioxide is acknowledged in the patent in suit (page 3, line 8) which refers to D2. According to D2, chlorine dioxide is stabilized by combination with a peroxy compound (D2, column 1, first paragraph).
- 2.8 The description and claims as originally filed refer merely to %, without clarification as to whether by weight or volume. Example 1 refers under "Materials" to "1. Purogene (2% ClO₂), Lot#8907.41, 1 gallon, Manufactured by BIO-Cide, International" and uses ml of chlorine dioxide concentrate to make solutions. Example II contains the statement that "Stabilized chlorine dioxide in alkaline solutions is present as sodium chlorite. Acidification of sodium chlorite results in the liberation of chlorine dioxide gas which is very reactive against organic material." The Board cannot accept the contention of the appellant that this provides a basis for interpreting 2% ClO₂ in the

description, let alone the claims, as meaning 2g of sodium chlorite per hundred millilitres of solution. Even if chlorine dioxide in alkaline solutions is present as sodium chlorite, there is no reason to assume that 2% ClO₂ is not a reference to an amount of this gas recoverable from, or possibly originally dissolved in, the solution whether in terms of % weight or % volume. The description simply contains no clear guidance as to whether % ClO₂ referred to concentration by % by weight or % by volume or to something different.

2.9 From the post-published material D14 on Purogene submitted by the appellant it appears that this was shipped as a solution of sodium chlorite to be activated by addition of a small amount of food grade acid before applying. It is suggested for use at concentrations between 200 and 400 ppm in particular for protecting potatoes against potato blight organisms. It is available in gallons and drums. No information is given on how precisely it is made up, so D14 provides no assistance in determining what 2% ClO₂ means. The expert witness for the appellant does not in D17 mention Purogene. There is nothing that suggests to the Board that a knowledge of what Purogene 2% ClO₂ might be, can be taken as part of the common general knowledge of the expert on dentifrices and mouthwashes. This leaves only the information in the patent itself, which is inadequate.

2.10 The amendments proposed to the claims in the main request, are not corrections as to which the Board is satisfied that nothing else would have been intended. The meaning of % volume exactly as stated in the claims as granted remains a possibility that cannot be

excluded. The appellant himself has put forward various other contentions in the course of opposition and appeal proceedings as to how the claims should be corrected, none of which can be dismissed as wholly impossible but none of which is uniquely convincing.

2.11 Further where, as here, allowing amendment under Rule 88 EPC, would amount to allowing the proprietors to go back on the claims proposed on their behalf for grant, reasons of legal certainty would speak against allowing any amendment under Rule 88 EPC.

2.12 The request for amendment under Rule 88 EPC is thus refused, and all the requests have to be considered on the basis that the granted claims are to be taken as they stand.

Article 123(3) EPC

3. The definition in claim 1 as granted "stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5% by volume based on the total volume of the composition" is taken by the board to refer to the volume of chlorine dioxide gas theoretically releasable per unit volume of the composition. It is common general knowledge for the skilled person that chlorine dioxide is a gas at ambient temperatures (compare also example II, page 5, lines 33-34 of the patent in suit).

3.1.1 The definition in the modified claim 1 of the main request "stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5% weight by volume based on the total volume of the composition" is taken by the Board to refer to the weight in grams of chlorine

dioxide gas theoretically releasable by 100 ml of the composition. This meaning while not strictly a percentage is, to the knowledge of the Board, quite widely used for substances in aqueous solutions, as for these the value obtained is a close approximation to a true weight percentage. Where the density of a composition differs substantially from 1 g/ml, as is almost certainly the case for a toothpaste, the same amount of ClO₂ in the composition will give a value stated on the % weight by volume basis greater than a true weight percentage for that amount of ClO₂ in the composition by a factor equal to the numerical value of the density of the composition. It can be taken as evident to the skilled person, even without doing any detailed calculations, that the same mass of ClO₂ in a particular claimed composition stated on a % by volume of ClO₂ gas basis will give a numerical value greater by a factor of the order of hundreds than when stated on a % by weight basis, because the density of a gas such as ClO₂, that is its mass per unit volume, is less than that of water or a toothpaste by an order of hundreds. The same mass of ClO₂ in a particular claimed composition stated on a % by volume of ClO₂ gas basis will also give a numerical value greater by a factor of the order of at least one hundred than when stated on a % weight by volume basis as now done in claim 1 of the main request.

- 3.1.2 It thus follows that "stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5% by volume based on the total volume of the composition" as in the granted claim 1 defines a quite different range for the amount of ClO₂ that is to be present in the composition than does the definition "stabilized chlorine dioxide

in a concentration in the range of 0.005% - 0.5% weight by volume based on the total volume of the composition" of the modified claim 1 of the main request. The maximum amount of ClO₂ permissible by 0.5% weight by volume is far higher than the maximum permissible by the granted range of 0.005-0.5% by volume. Thus claim 1 of the main request extends the scope of protection contrary to the requirements of Article 123(3) EPC, and already for this reason alone the main request must be refused.

- 3.1.3 For the same reasons as already stated in point 2.8 above the Board is unable to accept that the reference to stabilized chlorine dioxide in either the claim 1 as granted, or in claim 1 of the main request is to be read as a reference to sodium chlorite.

Auxiliary Request 1A

Article 123(3) EPC

- 3.2 Claim 1 has here been amended to refer to both the mouthwash composition and the dentifrice composition comprising "stabilized chlorine dioxide in a concentration in the range of 0.005% - 0.5% weight by volume based on the total volume of the composition". For the same reasons as given above in points 3 to 3.1.3 in connection with claim 1 of the main request, this introduction of "weight" compared to the claim 1 as granted involves a redefinition of the amount of chlorine dioxide that is to be present, in a way that extends the scope of protection. Auxiliary request 1A thus has to be refused already for this reason as contravening Article 123(3) EPC.

Auxiliary request 1

3.3 This request is directed to the same claims as the main request and must be refused for the same reasons stated above in points 3 to 3.1.3 in connection with claim 1 of the main request.

Auxiliary request 2

3.4 Auxiliary request 2 has a claim 1 corresponding to claim 1 of the main request but with the words "or mouthwash" deleted. This deletion does not avoid the objection under Article 123(3) EPC set out in points 3 to 3.1.3 which caused the Board to reject the main request. For the same reasons as set out in these points claim 1 of auxiliary request 2 contravenes Article 123(3), and this request too must be refused.

Auxiliary request 3

Article 100(c) EPC

4. Claim 1 of auxiliary request 3 corresponds to claim 9 as granted which claim was considered by the opposition division not to have a clear and unambiguous basis in the application as originally filed (see point IV of Facts and Submissions).

4.1 The claim contains amendments (see point II, paragraph (d) of Facts and Submissions) which made the previously appearing references to undefined % concentrations of chlorine dioxide and phosphate compound refer specifically to % by volume. The

appellant has not indicated any proper basis for that amendment and the Board sees no basis either. Consequently, the Board considers that this latter definition cannot be clearly and unambiguously derived from the application as originally filed. The lack of relevant information in the application is such that the Board considers it impossible to say with any confidence what the undefined original % concentrations referred to, % by weight, or % weight by volume. That they referred to % by volume is now neither the preferred interpretation of the appellant, nor supported by the evidence he submitted (D17) of an expert witness. The Board can only conclude that the amendments made in respect of this claim in the examining proceedings extended the subject-matter of the patent beyond the content of the application as filed. The ground of opposition of Article 100(c) EPC has thus been made out.

4.2 Since this claim 1 corresponds to claim 9 as granted without any further amendment other than to its number, the board has also considered whether the claim could be treated as a special case under the considerations set out in G 1/93 (*supra*).

4.2.1 According to G 1/93, a feature which has not been disclosed in the application as filed but which has been added to the application during examination but which, without providing a technical contribution to the subject-matter of the claimed invention, merely limits the protection conferred by the patent as granted by excluding protection for part of the subject-matter of the claimed invention as covered by the application as filed, is not to be considered as

subject-matter which extends beyond the content of the application as filed in the sense of Article 123(2) EPC. The ground for opposition under Article 100(c) EPC therefore does not prejudice the maintenance of a European patent which includes such a feature (headnote 2). If such added feature, although limiting the scope of protection conferred by the patent, has to be considered as providing a technical contribution to the subject-matter of the claimed invention it would give an unwarranted advantage to the patentee contrary to the purpose of Article 123(2) EPC.

- 4.3 The Board considers that before this amendment was made to the claim the application may have been read as referring to % weight, in accordance with the industry standard, as mentioned in D17 by the expert witness, or possibly % weight by volume (that is weight per 100 ml), but in the absence of an indication in the application as filed referring to % by volume the reader would not have taken this possibility into serious consideration. As set out in points 3 to 3.1.3 above a particular % range for a gas such as chlorine dioxide indicates quite different amounts of chlorine dioxide if it refers to % by volume, than if it refers to % by weight or % weight by volume. Thus, defining the concentration ranges by reference to % volume provided a technical contribution to the subject-matter of the claimed invention which might give an unwarranted advantage to the patentee contrary to the purpose of Article 123(2) EPC. The change introduced cannot thus be ignored on the principles developed in decision G 1/93, and the added feature "by volume" cannot be regarded as a mere limitation of the scope of protection.

4.4 Thus auxiliary request 3 is not allowable as it contravenes Article 100(c) EPC.

Auxiliary request 4

5. Auxiliary request 4 amounts to four different requests, corresponding to the main request (identical with auxiliary request 1), auxiliary request 1A, auxiliary request 2 and auxiliary request 3, in each case modified by replacing the term "stabilizer" in claim 1 and the respective independent use claim by the term "activating inhibitor". This modification was introduced to avoid any objection that the introduction of "stabilizer" was an introduction of subject-matter extending beyond the content of the application as filed. Irrespective of whether or not this modification was necessary to avoid such an objection, the modification does not avoid the objections (as set out above) which caused the main request (identical with auxiliary request 1), auxiliary request 1A, auxiliary request 2, and auxiliary request 3 to be rejected as not in conformity with the EPC. The same reasons as caused the rejection of the main request, auxiliary request 1A, auxiliary request 2, and auxiliary request 3 (see reasons, points 2. to 4 above) thus require the four modified requests together forming Auxiliary Request 4 to be rejected as not in conformity with the EPC (Rule 88, Art. 123(3) and 100 (c) EPC).

Auxiliary request 5

6. Auxiliary request 5 amounts to eight different requests, corresponding to the main request (identical with auxiliary request 1), auxiliary request 1A, auxiliary

request 2, and auxiliary request 3, and the four requests of auxiliary request 4, each respectively modified so that the independent claims are additionally limited to a phosphate selected from mono- or dibasic sodium phosphate, or trisodium phosphate. This modification appears to have been introduced to avoid certain prior art. Whether or not this modification was necessary to avoid such an objection on the basis of such prior art, it does nothing to avoid the reasons why these eight previous requests were rejected as not in conformity with the EPC. The same reasons as caused the rejection of these eight previous requests (see reasons 2. to 5. above) thus require the eight modified requests together forming Auxiliary Request 5 to be rejected as not in conformity with the EPC (Rule 88, Art. 123(3) and 100(c) EPC).

Auxiliary request 6

7. Auxiliary request 6 amounts to eight different requests, corresponding to the main request (identical with auxiliary request 1), auxiliary request 1A, auxiliary request 2, and auxiliary request 3, and the four requests of auxiliary request 4, each respectively modified so that all claims are limited to trisodium phosphate. This modification appears to have been introduced to avoid certain prior art. Whether or not this modification was necessary to avoid such an objection on the basis of such prior art, the modification does nothing to avoid the reasons why these eight previous requests were rejected as not in conformity with the EPC. The same reasons as caused the rejection of these eight previous requests (reasons, point 2. to 5.) thus require the eight modified

requests together forming Auxiliary Request 6 to be rejected as not in conformity with the EPC (Rule 88, Art. 123(3) and 100(c) EPC).

8. The Board would remark that the way the appellant has introduced some further twenty auxiliary requests by what he named Auxiliary requests 4, 5 and 6 (see points 5. to 7. above) cannot be regarded as a satisfactory way of introducing requests, since these requests are not presented in the form that formulates a claim or a set of claims which allows to evaluate whether the requirements of the EPC are met. As here no new and different issues needed to be considered and decided, the Board has in this case foregone raising objections to the form of these auxiliary requests 4, 5 and 6, as not being suitable for admission into the proceedings.

9. As none of the requests put forward by the appellant meets the requirements of the EPC, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed

The Registrar

The Chairman

C. Eickhoff

S. Perryman