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Boards of Appeal

Chambres de recours

Case Number: W 0004/96 - 3.3.2  
International Application No. PCT/EP95/03309

Decision of 15 September 1997 correcting  
an error in the decision  
of the Technical Board of Appeal 3.3.2  
of 20 December 1996

Applicant (01):

UNILEVER N.V.  
Weena 455  
3013 Al Rotterdam (NL)

Applicant (02):

UNILEVER PLC  
Unilever House  
Blackfriars  
London EC4 4BQ (GB)

Subject of the Decision:

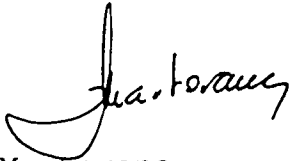
Protest according to Rule 40.2(c) of the Patent  
Cooperation Treaty made by the applicant  
against the invitation (payment of additional  
fee) of the European Patent Office (branch at  
The Hague) dated 25 July 1996.

Composition of the Board:

Chairman: P. A. M. Lançon  
Members: U. Oswald  
R. Teschemacher

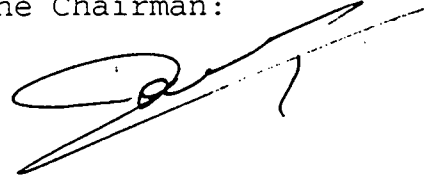
In application of Rule 89 EPC page 2, line 7 of the decision in the protest case W 0004/96 - 3.3.2 is corrected by the substitution of "Rule 13.1" for "Article 13.1".

The Registrar:



P. Martorana

The Chairman:



P. A. M. Lançon

Tc 16.9.  
②-11.7.97

**Internal distribution code:**

- (A)  Publication in OJ  
(B)  To Chairmen and Members  
(C)  To Chairmen

**D E C I S I O N**  
of 20 December 1996

**Case Number:** W 0004/96 - 3.3.2

**Application Number:** PCT/EP95/03309

**Publication Number:** W096/05802

**IPC:** A61K 7/20

**Language of the proceedings:** EN

**Title of invention:**

Teeth whitening composition containing organic peroxyacids

**Applicant:**

UNILEVER N.V., et al

**Opponent:**

-

**Headword:**

Teeth whitening/UNILEVER

**Relevant legal provisions:**

PCT Art. 17(3)a

PCT R. 13.1, 13.2, 40.1, 40.2(c)(e)

**Keyword:**

"Lack of unity "a posteriori" - yes"

"Absence of a common technical feature defining a contribution of the claimed Markush grouping over the prior art"

**Decisions cited:**

G 1/89

**Headnote:**

- I. An objection of lack of unity may be raised "a posteriori" in regard to all categories of grouping of alternatives of chemical compounds.

- II. The requirement of a technical relationship as defined in Rule 13.2, 1st sentence, PCT, may be met when all claimed alternatives belong to a class of compounds which may be expected to behave in the same way in the context of the claimed inventions ("Markush claims"). The technical relationship involves those common special technical features that define a contribution over the state of the art (Rule 13.2, 2nd sentence, PCT). However, such contribution cannot be recognized on the basis of this expectation if members of the class have already been shown in the prior art to behave in the manner disclosed in the application.

**Internal distribution code:**

- (A)  Publication in OJ  
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Teeth whitening composition containing organic peroxyacids

**Applicant:**

UNILEVER N.V., et al

**Opponent:**

**Headword:**

Teeth whitening/UNILEVER

**Relevant legal provisions:**

PCT Art. 17(3)a  
PCT R. 13.1, 13.2, 40.1, 40.2(c)(e)

**Keyword:**

"Lack of unity "a posteriori" - yes"  
"Absence of a common technical feature defining a contribution  
of the claimed Markush grouping over the prior art"

**Decisions cited:**

G 1/89

Headnote follows.

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Case Number: W 0004/96 - 3.3.2  
International Application No. PCT/EP95/03309

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.2  
of 20 December 1996

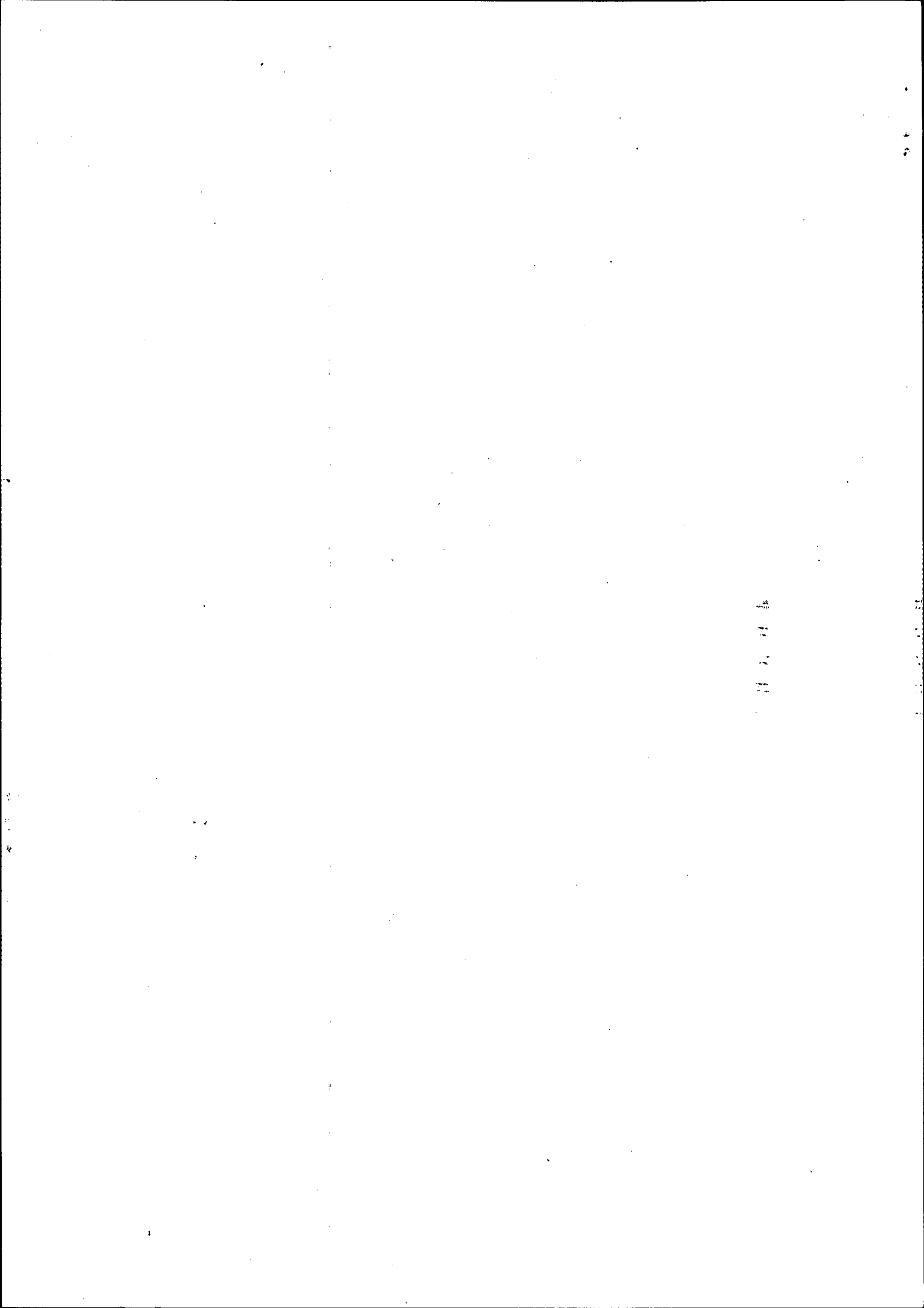
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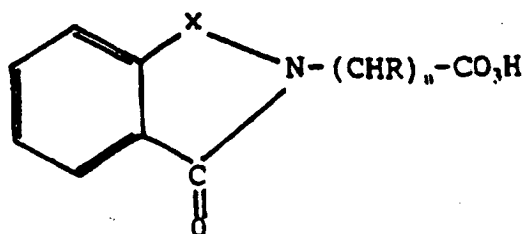




## Summary of Facts and Submissions

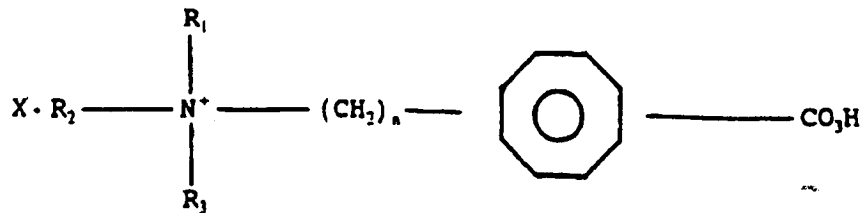
- I. On 18 August 1995, the Applicants filed International Patent Application PCT/EP95/03309 containing four claims.
- II. On 23 February 1996, the EPO, acting as International Search Authority (ISA), sent to the Applicants an invitation to pay six additional search fees in accordance with Article 17(3)(a) and Rule 40.1 PCT.
- III. The ISA indicated that the problem underlying the invention was to provide alternative teeth whitening compositions comprising organic peroxy acids. Since several prior art documents, inter alia document (3) US-A-3 988 433 related to such compositions, the ISA concluded that neither the organic peroxy acid function forming the only structural feature common to the seven compounds or groups of compounds listed in claim 1, nor the teeth whitening effect of these compounds could be regarded as defining any contribution over the prior art. More particularly, the ISA took the view that in the light of the disclosures of document (5) EP-A-450 587 and document (6) EP-A-453 970 describing teeth whitening compositions comprising "6-phthalimidoperoxyhexanoic acid (PAP)", which compound belonged to the first group

1)



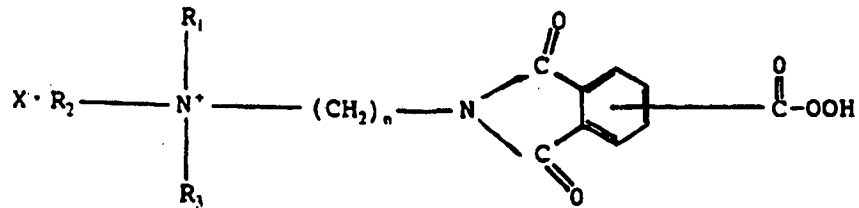
of the seven compounds or groups of compounds, there was a lack of a special technical feature within the meaning of Rule 13.2 PCT, and thus the claimed compounds were not linked so as to form a single general inventive concept. Accordingly, the ISA came to the conclusion that the requirement of unity as set out in Article 13.1 PCT was not met and the search was carried out only for the first invention of the group of seven inventions. The six additional search fees were requested for the groups of compounds having the general formulas "2) to 4)"

2) \*

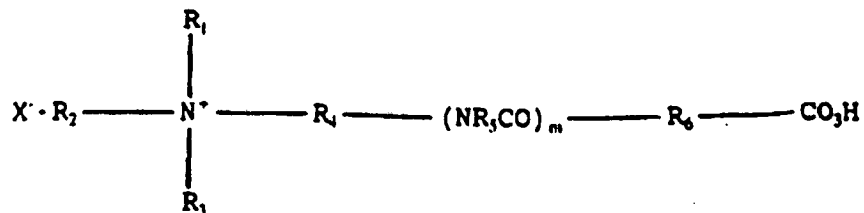


2) \* Having regard to page 4, first paragraph of the application documents, it is immediately clear that formula "2)" represents a quaternary benzylperoxid and hence contains a benzyl group

3)



4)



and

the compounds "5) to 7)", namely butyl imido peroxytrimellitic acid ("BIPTA"); 6,6'-terephthal-di(amidoperoxyhexanoic)acid ("TPCAP") and monononylamide of peroxyadipic acid ("NAPAA") of claim 1.

IV. On 22 March 1996, the Applicants paid the additional search fees under protest in accordance with Rule 40.2(c) PCT. In support of the protest, the Applicants argued that:

- claim 1 comprised a so-called "Markush Grouping" of organic peroxy acids and in accordance with "the EPO guidelines, Part C, Chapter III, point 7.4a", unity of invention should be considered to be present since the alternatives (in the Markush Grouping) all had a common activity (bleaching) and since they all belonged to the class of peroxy acids, and a common structure was present (the peroxy group);
  
- in the alternative, where the Markush Grouping would not be considered to confer unity of invention, it was clear that the peroxy acids 1) and 5) belonged to the imide-type peroxy acids, the peroxy acids 6) and 7) belonged to the amido-linked peroxy acids, and the peroxy acids 2), 3) and 4) belonged to the cationic substituted peroxy acids, and hence there were at most three different inventions.

Accordingly, the Applicants requested the refund of the total amount of additional fees and, as an auxiliary requested, a reduction in the amount of the additional fees required to twice the search fee, together with the refund of the balance of the total amount of additional fees paid.

- V. On 25 July 1996, the result of the prior review provided for in Rule 40.2(e) PCT was communicated to the Applicants.

The Review Panel found the above invitation to pay the additional search fees completely justified and invited the Applicants to pay a protest fee for the examination of the protest pursuant to Rule 40.2(e) PCT. The Review Panel took up the Applicants alternative point of view, namely discussing the matter of unity on the basis of three different subgroups of peroxy acids. Moreover, the Review Panel referred to the Administrative Instructions under the PCT (WIPO Document PCT/GEN/11), in particular pages 49/50 relating to the "Markush Practice". On the basis of documents referred to in the said "Invitation" and on the basis of further documents cited in the International Search Report under Article 18 PCT covering all searchable claims, it was found that the prior art individually disclosed at least one compound of each of the said three groups of peroxy acids having bleaching activity. Accordingly, the Review Panel found that there was a lack of unity even when taking into account the Applicants alternative request.

- VI. On 20 August 1996, the Applicants paid the protest fee.

## Reasons for the Decision

1. The protest is admissible.
2. From the wording of Rule 40.2 PCT it is clear that the Board has to examine the protest (Rule 40.2(c) and (e) PCT: examination of the protest) which the Applicants made when paying the additional fees (Rule 40.2(c) PCT). The Board has therefore to take account of the points set out in sections II to IV above.
3. Whereas the Applicants have referred to the Guidelines for Examination in the EPO, Part C-III, 7.4a, the relevant source of instructions is the PCT Search Guidelines (PCT Gazette 1992, 14025; in respect of the binding character of these Guidelines, see Decision G 1/89 OJ EPO 1991, 155, Reasons 6). The PCT Search Guidelines include by reference in Chapter VII, 1, Annex B of the Administrative Instructions under the PCT (PCT Gazette 1996, 9427, in this respect identical to the previous version published in PCT Gazette 1992, 7016), dealing with unity of invention and in particular with Markush practice. The Applicants' reference to the wrong set of Guidelines is irrelevant to the present decision since both sets of Guidelines are based on the same principles in respect of the question at issue.
4. The Board agrees with the Applicants' starting point that unity of invention should be considered to be present when all alternatives in a claim comprising a Markush grouping have a common activity and a significant structural element shared by all of the alternatives (see Annex B (cited above) Part 1(f)(i)(A) and (B)(1)).

According to said Annex B (cited above), more particularly, Part 1(f)(v), "when dealing with alternatives, if it can be shown that at least one Markush alternative is not novel over the prior art, the question of unity of invention shall be reconsidered by the examiner". This can only mean that the significance of a common structural element has to be reassessed in the light of the prior art revealed by the search i.e. *a posteriori*.

5. In the invitation to pay additional search fees the ISA made a lack of unity objection "*a posteriori*" having regard to several documents, inter alia to document (5). Such objections are permissible in clear cases (see Decision G 1/89, OJ EPO 1991, 155).
6. Document (5) discloses on page 7, lines 25/26 and example 1 the compound "ε-Phthalimidoperoxyhexansäure" (PAP) having bleaching activity for use in dental hygiene preparations. This was not contested by the Applicants.

Accordingly, the ISA's objection that the prior art describes a compound both belonging structurally to the first group of the list in claim 1 and having the required teeth whitening effect is well founded.

7. Rule 13.2 specifies that a group of inventions claimed in the same international application can only form a single general **inventive** concept within the terms of Rule 13.1 PCT when there is a technical relationship among those inventions involving one or more of the same or corresponding **special** technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes **over** the prior art.

The unifying features conferring the said technical relationship between the seven groups of compounds or compounds according to claim 1 were the peroxy group and the bleaching (teeth whitening) activity. Taking into account the fact that **each** of the individual chemical structures (alternatives in the Markush Grouping) according to the seven groups of compounds or compounds in claim 1 contains these features and the fact that novelty of both, the common structure and the common activity has been destroyed (see paragraph 6 above), there is nothing left which could be seen as a link between the **remaining** features. It is particularly to be noted that the Applicants' protest did not contain any argumentation relating to effects other than the bleaching activity and the Board does not prima facie see a further unifying activity or structure in the remaining separate features, even when taking into account combinations of the claimed groups of compounds.

8. Referring to the Guidelines for Examination in the EPO, Part C-III, 7.4a, the Applicants only argued on the basis of an alleged common structure of the alternatives, the peroxy group, and a common activity, bleaching (corresponding to the criteria as set out in Annex B (cited above), Part 1(f)(i)(A) and (B)(1)). It has been shown that this is not the case, *a posteriori*, in view of the relevant state of the art as outlined above. The question may, however, also be raised whether unity may be accepted under Annex B, Part 1(f)(i)(B)(2). According to this alternative the unifying criterion may be that "all alternatives belong to a recognised class of chemical compounds in the art to which the invention pertains", which means that the elements of the class are expected to behave in the same way in the context of the claimed invention (Annex B, Part 1(f)(iii)).

The Board is of the opinion that the "a posteriori" assessment of unity has to be made in all circumstances in the same way, since the legal requirement of Rule 13 PCT is the same for all cases. This applies also to the different situations addressed in Annex B, Part 1(f)(i) where it is said that "the situation involving the so-called Markush practice" is also governed by Rule 13.2 PCT. Therefore, the "a posteriori" assessment of unity in cases of a functional relationship within a group of compounds has to be made in a manner corresponding to the assessment in cases of a structural relationship. This may also be derived from Annex B, Part 1(f)(v) according to which the question of unity shall be reconsidered if one Markush alternative turns out not to be novel. This is appropriate for compounds related by their structure as well as for compounds related by their function. The structural relationship within the meaning of Annex B, Part 1(f)(i)(B)(1) and the relationship within the meaning of Annex B, Part 1(f)(i)(B)(2) and (iii) serve the same purpose: both tests are intended to show whether the alternative compounds are of a similar nature as it is said in the introductory part of Annex B, Part 1(f)(i). These tests are only tools in order to determine whether there is unity of invention as defined in Rule 13 PCT. According to the legal definition given in Rule 13.2, second sentence, PCT, unity requires that there is a "common technical feature" defining a contribution of the claimed inventions over the prior art. The fact that all claimed alternatives belong to a group or a class of compounds, which may be expected to behave in the same way in the context of the claimed inventions, can be regarded as a contribution over the prior art only if members of the group have not previously been used in the manner disclosed in the application. Otherwise, the state of the art would be neglected in the assessment of unity. This would contradict the general principle that consideration of unity has to be carried



out on an "a posteriori" basis (Decision G 1/89, cited above), Reasons 5). Therefore, the fact that all alternatives have the same bleaching effect in dental hygiene preparations does not establish unity in the absence of novelty and inventiveness.

9. Incidentally, it is immediately apparent that after taking the prior art revealed by the search into consideration, the Applicants' further argumentation relating to unity of invention within the subgroups classified as imide-type, amido-linked and cationic substituted peroxyacids is in no way justified. Whereas it was not the responsibility of the Review Panel to continue examination, it was appropriate to take up the Applicants' approach to establish the presence of unity of invention. As set out above, document (5) relates to PAP, i.e. a so-called imide type peroxyacid compound and document (3) describes in Example II-(I), col. 11, P-(trimethylammonium sulfate) peroxybenzoic acid, i.e. a cationic substituted peroxyacid. It is also prima facie clear from the description of the application on page 3, lines 29 to 36 and page 4, lines 1 to 22 referring to several prior art documents that most of the claimed compounds are known per se. In this respect, it is, for example, indicated on page 4, line 22, that document (7) EP-A-349 220 describes monononylamide of peroxyadipic acid ("NAPAA"), a compound falling under the subclass of so-called amido-linked peroxyacids. Document (7) and additional prior art were taken up to show that a lack of unity between and within each of the said three subgroups of peroxyacids was directly apparent and that thus, even by taking into account the Applicants' alternative attempt to establish unity of the invention again, claim 1 fell into seven separate groups of peroxyacids.

10. Having regard to the additional prior art on which the review was based and which had not been mentioned in the "Partial International Search Report" (Annex to Form PCT/ISA/206, dated 23 February 1996) (see paragraph V above), it is pointed out that a well reasoned invitation to pay additional search fees in accordance with Article 17(3)(a) and Rule 40.1 PCT does not have to be based on a complete search for the subject-matter of each claim, but that the invitation is to at least comprise a search relating to the so-called first invention as assessed by the ISA.
  
11. For all of these reasons the International Application No. PCT/EP95/03309 does not fulfil the requirements of Rule 13.1 PCT and the invitation to pay the six additional fees was justified.

**Order**

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

The protest according to Rule 40.2(c) PCT is dismissed.

The Registrar:

The Chairman:

P. Martorana

P. A. M. Lançon