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D E C I S I O N  
of 21 August 2002

Case Number: T 0352/98 - 3.3.6

Application Number: 94810726.3

Publication Number: 0659877

IPC: C11D 3/42

Language of the proceedings: EN

Title of invention:  
Composition for the treatment of textiles

Applicant:  
Ciba Specialty Chemicals Holding Inc.

Opponent:  
-

Headword:  
UV absorber/CIBA

Relevant legal provisions:  
EPC Art. 56

Keyword:  
"Main request: novelty (yes)"  
"Inventive step (yes) - problem to be solved was not addressed  
in the prior art documents"

Decisions cited:  
-

Catchword:  
-



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Boards of Appeal

Chambres de recours

Case Number: T 0352/98 - 3.3.6

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.6  
of 21 August 2002

**Appellant:** Ciba Specialty Chemicals Holding Inc.  
Klybeckstrasse 141  
CH-4057 Basel (CH)

**Representative:** -

**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 3 December 1997  
refusing European patent application  
No. 94 810 726.3 pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** P. Krasa  
**Members:** G. N. C. Raths  
M.-B. Tardo-Dino

## Summary of Facts and Submissions

I. This appeal is from the decision of the Examining Division refusing European patent application No. 94 810 726.3 concerning a composition for the treatment of textile.

During the examination procedure the following documents were cited

- (1) JP-A-63 162 798 (chemical Abstract 109, 212841 and Derwent Abstract acc. No. 88-230562/33);
- (2) EP-A-345 212;
- (3) WO-A-89 03826;
- (4) BE-A-643 898;
- (5) M. Brock, "Neue Entwicklungen auf dem Gebiet der Wäschespüler", Tenside Surf. Det. 30(6), 1993, 394-9;
- (6) P. Krings und R. Puchta, Aspekte der Weichspülerentwicklung, Seifen-Öle-Fette-Wachse, 109(6), 1983, 143-8.

II. The Examining Division held the subject-matter of the then pending claims to be novel over document (1). Document (1) disclosed a softening agent composition comprising a cationic fabric softener and 0.001 to 1 weight% of o-hydroxyphenylbenzotriazole as UV absorber; the amount of absorber according to the patent in suit was above 1%.

The Examining Division further held the subject-matter of the then pending claims not to involve an inventive step in view of documents (1) to (6).

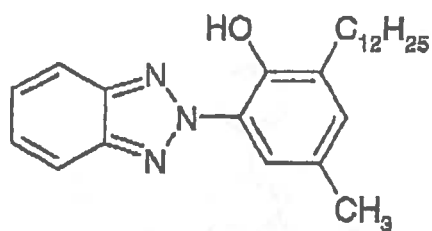
Document (2) disclosed UV absorbers preventing yellowing, document (3) disclosed benzotriazoles providing stain resistance and dye light fastness. In the light of documents (2) and (3) the fabric treated according to document (1) comprised UV absorbers which were absorbed by the fabric. Document (4) disclosed specific tear strength improving UV absorbers so that the textiles treated with them were expected to have improved tear strength. Further, the application of a higher amount of UV absorber lead to a higher sun protection factor called "SPF value". The use of an amount of more than 1% UV absorber was furthermore disclosed by documents (3) and (4).

III. The appellant (proprietor) lodged an appeal against this decision. With the letter dated 15 March 2002, it filed two sets of claims as a main request, comprising 25 claims, and an auxiliary request, comprising 21 claims. Clerical errors in the main request were redressed with the letter dated 8 July 2002.

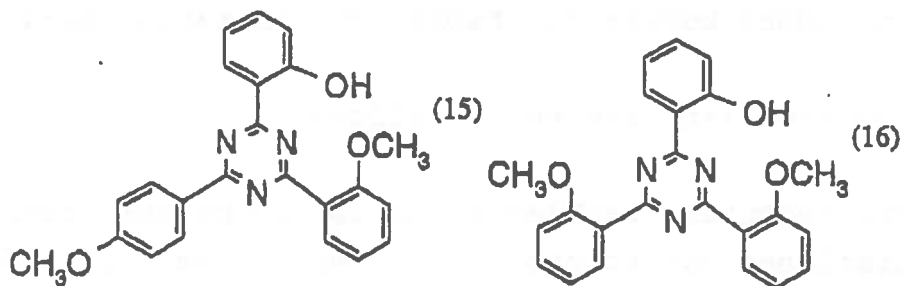
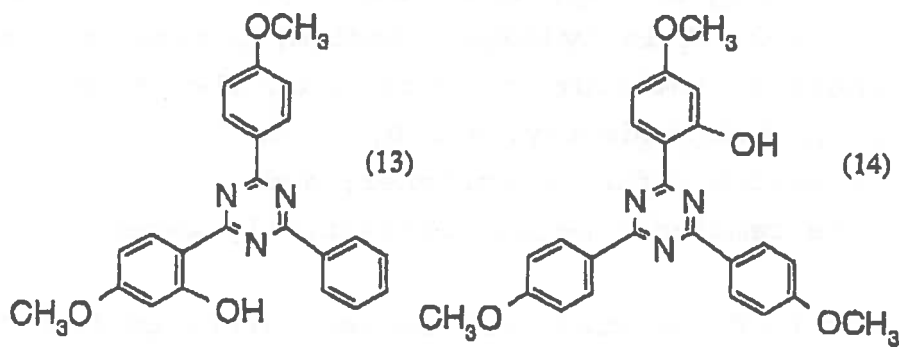
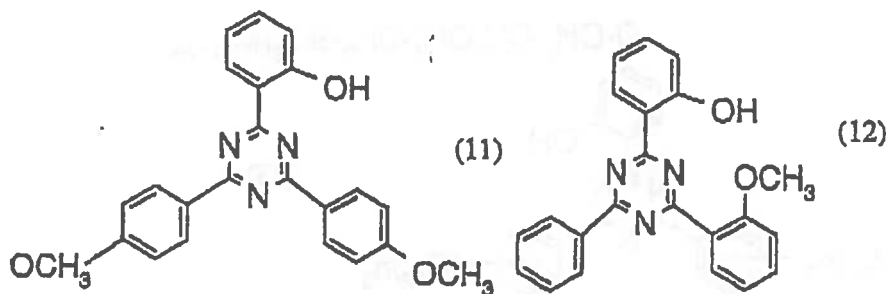
Claim 1 of the main request read:

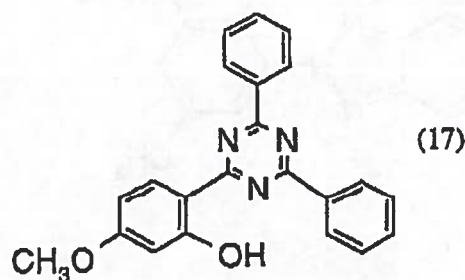
"1. A stable, concentrated fabric rinse composition comprising:

a) 1 to 10% by weight, based on the total weight of the composition, of a UV absorber selected from an o-hydroxyphenylbenzotriazole of formula

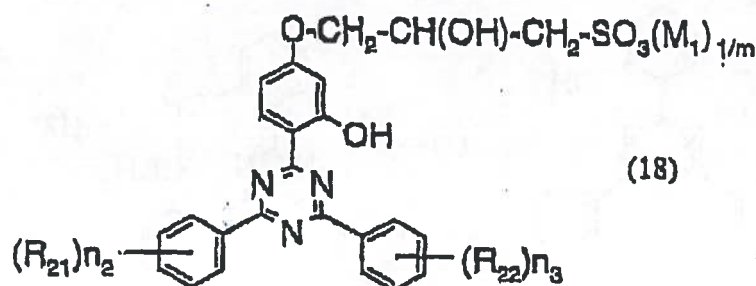


or a hydroxyaryl-1,3,5-triazine of formula





or a sulphonated-1,3,5-triazine of formula



in which  $R_{21}$  and  $R_{22}$ , independently, are  $C_1$ - $C_{12}$  alkyl;  $m$  is 1 or 2;  $M_1$  is hydrogen, sodium, potassium, calcium, magnesium, ammonium or tetra- $C_1$ - $C_{12}$  alkylammonium; and  $n_2$  and  $n_3$ , independently, are 0, 1, or 2;  
b) a cationic fabric softener; and  
c) the remainder being substantially water."

Claim 1 of the auxiliary request differed from Claim 1 of the main request in that the passage "A method for the improvement of the SPF-value of a textile article, comprising applying, to a previously washed article," was added before "a stable, concentrated fabric rinse".

IV. The appellant argued as follows:

The technical problem to be solved by the invention as disclosed was to provide a composition for rendering fabric less permeable to UV radiation.

On the contrary, document (1) addressed the protection of coloured softening agents against discolouration and dye fading. For solving this technical problem, it was not important whether or not the UV absorbing agent was adsorbed on the fabric. Therefore a person skilled in the art would not have paid attention to document (1) since it related to a technical problem being completely different from the application in suit. Document (1) therefore could not be taken as the starting point for evaluating inventive step. Moreover, the addition of an UV absorbing agent lowered the viscosity of the aqueous softening agent composition; even phase separation occurred. In contrast, the composition according to the application in suit would lead to stable compositions (page 3, lines 17 to 21; page 4, lines 20 to 25).

But even if document (1) was taken as the closest prior art document, this document would not lead to the composition of Claim 1. Further, the rinse compositions comprised a higher UV absorption agent content than in document (1). Also, the comparison data submitted by the appellant (see letter dated 15 March 2002) showed that Tinuvin 328 according to document (1) had a lower sun protection factor (SPF) value than the o-hydroxyphenylbenzotriazole according to the application in suit. The SPF values of fabric samples treated according to the invention illustrated the effect due to the specific UV-absorbers, the reference being non treated cotton (SPF=3.8). The SPF values of cotton treated with o-hydroxybenzotriazole, a triazin (compound 17) and a sulphonated triazin (compound 18) were higher (21, 13 and 24, respectively) than the SPF value of cotton treated with Tinuvin 328 (8) according to document (1).

Documents (2) to (6) were not relevant for the evaluation of inventive step.

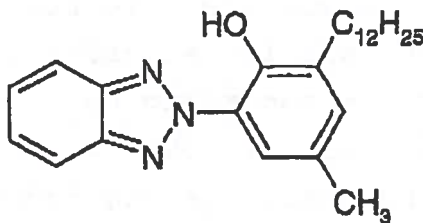
V. The Appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the main request or the auxiliary request.

VI. On request by the Board, the Appellant, with the letter dated 7 June 2002, filed a description adapted to the claims of the main request.

### Reasons for the Decision

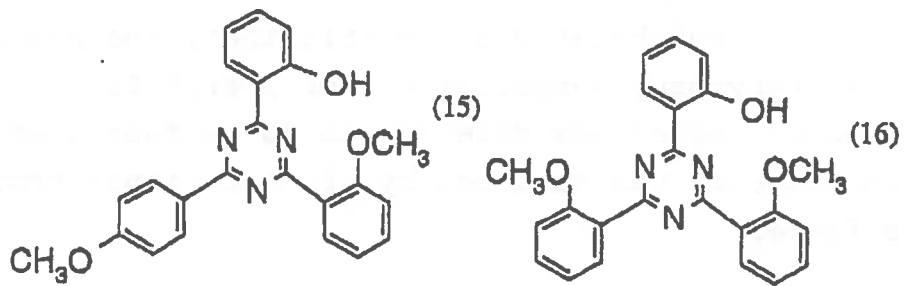
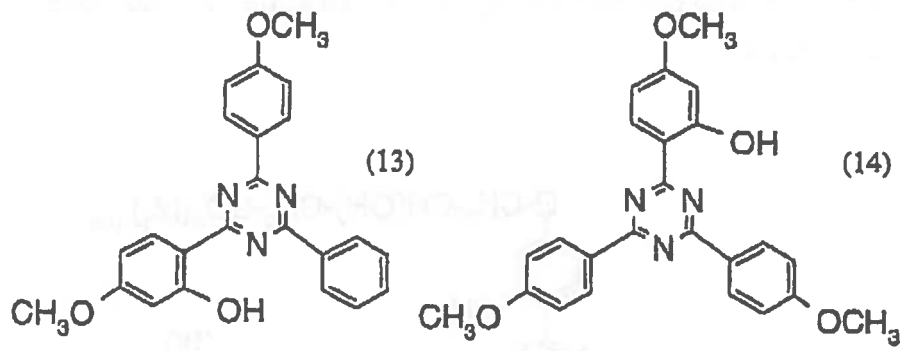
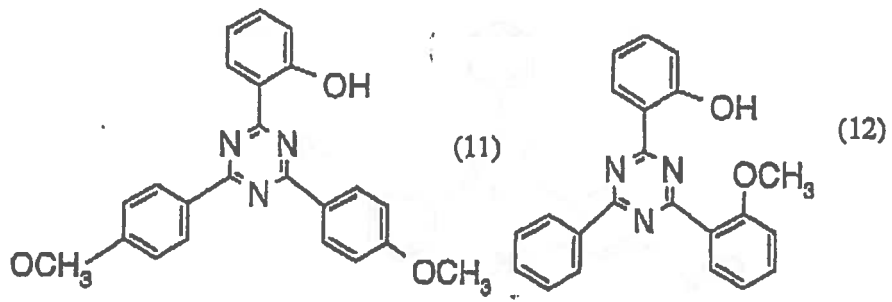
#### 1. Articles 84 and 123 EPC

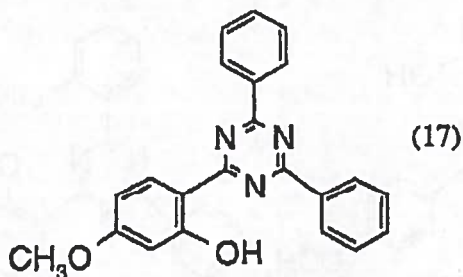
Claim 1 of the main request differs from Claim 1 as originally filed in that "20%" was replaced by "10%", "an o-hydroxyphenylbenzotriazole of formula



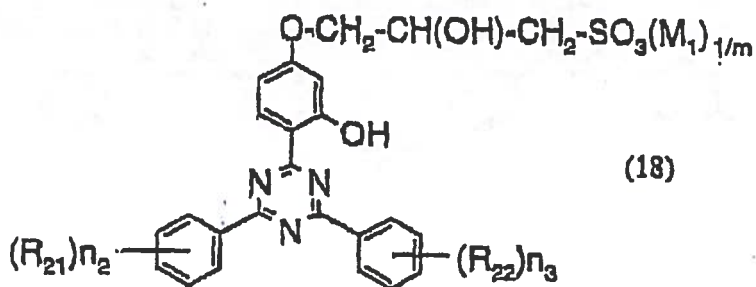
or" was inserted between "selected from" and "a", the passage "of formula







or" was inserted between "hydroxyaryl-1,3,5-triazine" and "a sulphonated-1,3,5-triazine", and the passage "of formula



in which  $R_{21}$  and  $R_{22}$ , independently, are  $C_1$ - $C_{12}$  alkyl;  $m$  is 1 or 2;  $M_1$  is hydrogen, sodium, potassium, calcium, magnesium, ammonium or tetra- $C_1$ - $C_{12}$  alkylammonium; and  $n_2$  and  $n_3$ , independently, are 0, 1, or 2," was inserted after "a sulphonated-1,3,5-triazine", the passage "an o-hydroxyphenylbenzotriazole or 2-aryl-2H-benzotriazole" was deleted and "b) a fabric care ingredient" was replaced by "b) a cationic fabric softener".

The upper limit of "10%" finds its basis in claim 2 as originally filed; the compounds according to the above mentioned formula (13), (14), (15), (16), (17) and (18) find their basis on pages 11 and 12 of the application

as originally filed; the words "a cationic fabric softener" find their support in claim 5 as originally filed.

The Board is satisfied that Claim 1 meets the requirements of Articles 84 and 123(2) EPC.

2. *Novelty*

The Board is satisfied that the subject-matter of the claims of the main request was not anticipated by any one of the cited documents. As novelty was not an issue, no further reasons need to be given.

3. *Inventive step*

3.1 Claim 1 concerns a stable, concentrated fabric rinse composition comprising 1 to 10% by weight of an UV absorber selected from an o-hydroxyphenylbenzotriazole of a formula as indicated in the claim or a hydroxyaryltriazine of formula (11), (12), (13), (14), (15), (16) or (17) or a sulphonated-1,3,5-triazine of formula (18), a cationic fabric softener and water which compositions are intended to increase the SPF values of fabrics.

3.2 Document (2) addressed the problem of yellowing of polyamid fabrics but did not disclose a rinse composition; neither did it hint to softening rinsing agents nor did it disclose dodecyl substituents at the phenyl residue of the hydroxyphenylbenzotriazole.

The goal of document (3) was to provide nylon fibres with non-sulphonated benzotriazoles in order to improve dirt prevention behaviour and light fastness.

Document (4) concerned the avoidance of a change in hue of a fabric under UV light.

Documents (5) and (6) described cationic softening rinsing compositions.

None of the cited documents mentions the SPF value, let alone deals with increasing it.

3.3 The problem as stated in the application in suit was to increase the SPF of clothing in order to provide protection against UV radiation for skin (page 2, lines 29 to 32).

3.4 The examples of the application in suit prove that this technical problem defined at point 3.3 was credibly solved by the compositions of Claim 1. Therefore there is no need to reformulate it.

3.5 The question remains whether or not the compositions comprising the UV absorbers as defined in Claim 1 involve an inventive step.

3.6 Since the above defined problem underlying the invention as claimed was not addressed by any of the cited documents, a skilled person looking for a solution of this problem would not have consulted these documents. The state of the art available to the skilled person did not contain an indication to use the UV absorbers as defined in Claim 1 of the application in suit for solving the existing technical problem. Therefore, the subject-matter of Claim 1 involves an inventive step.

Dependent claims 2 to 20 represent preferred embodiments of the same inventive concept.

Independent claim 21 is directed to a method for treating the textile article comprising the application of the composition according to Claim 1. This claim and claims 22 to 25 depending from claim 21 derive their patentability from Claim 1.

Claims 1 to 25 meet the requirements of Article 56 EPC.

## Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a patent on the basis of
  - Claims 1 to 25 of the main request, i.e. claims 1 to 4 annexed to the letter dated 8 July 2002 and claims 5 to 25 annexed to the letter dated 15 March 2002; and
  - the following description: pages 1 to 3 and 6 to 28 annexed to the letter dated 7 June 2002 and pages 4 and 5 annexed to the letter dated 8 July 2002.

The Registrar:



M. Dainese

The Chairman:



P. Krasa