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**Datasheet for the decision
of 25 June 2009**

Case Number: T 0292/05 - 3.3.07

Application Number: 95913647.4

Publication Number: 0699248

IPC: D06M 16/00

Language of the proceedings: EN

Title of invention:

Methods for treating non-cotton-containing cellulosic fabrics
with cellulase

Patent Proprietor:

GENENCOR INTERNATIONAL, INC.

Opponents:

NOVOZYMES A/S

Headword:

-

Relevant legal provisions:

RPBA Art. 10b(1)(2)(3)

Relevant legal provisions (EPC 1973):

EPC Art. 54

Keyword:

"Novelty (no) - Main Request"

"Fresh claims admissible under the RPBA (no) - supplementary
First to Fourth Auxiliary Requests"

Decisions cited:

-

Catchword:

-



Case Number: T 0292/05 - 3.3.07

D E C I S I O N
of the Technical Board of Appeal 3.3.07
of 25 June 2009

Appellants:
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 29 December 2004
revoking European patent No. 0699248 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: S. Perryman
Members: G. Santavicca
D. Semino

Summary of Facts and Submissions

I. The appeal lies from a decision of the Opposition Division revoking European patent 0 699 248, granted on European application No. 95 913 647.4.

II. The application as filed comprised 8 claims, reading, respectively, as follows:

"1. In a method for enhancing the feel and/or appearance and/or for providing color enhancement to a non-cotton containing cellulosic fabrics during manufacture of the fabric by treatment of the fabric with a composition comprising a naturally complete fungal cellulase composition which comprises exo-cellobiohydrolase type component(s) and endoglucanase type component(s) wherein the improvement comprises modifying the naturally complete fungal cellulase composition to comprise at least 10 weight percent of endoglucanase type components based on the total weight of protein in the fungal cellulase composition and be free of all CBH I type cellulase components."

"2. The method according to Claim 1 wherein said fungal cellulase composition is free of exo-cellobiohydrolase II type component."

"3. The method according to Claim 1 wherein said fungal cellulase composition comprises at least about 20 weight percent of said endoglucanase type component(s) based on the total weight of protein in the cellulase composition."

"4. An improved method for the treatment of a non cotton containing fabrics with an aqueous fungal cellulase solution wherein said method is conducted with agitation under conditions so as to produce a cascading effect of the cellulase solution over the fabric wherein said improvement comprises employing a fungal cellulase composition which is free of all exo-cellobiohydrolase I type components."

"5. A method according to Claim 4 wherein said fungal cellulase composition is also free of exocellobiohydrolase II type components."

"6. A method according to Claim 4 wherein said fungal cellulase composition comprises at least about 20 weight percent of said endoglucanase type component(s) based on the total weight of protein in the cellulase composition."

"7. A non-cotton containing cellulosic fabric having improved feel and/or appearance wherein said fabric is prepared by the method defined in Claim 1."

"8. A non cotton-containing fabric having improved feel and/or appearance wherein said fabric is prepared by the method defined in Claim 4."

III. The patent in suit was granted with 6 Claims, reading, respectively, as follows (additions to the claims as filed emphasized in bold, deletions in strikethrough):

"1. ~~In a~~ **A** method for enhancing the feel and/or appearance and/or for providing color enhancement to a non-cotton containing cellulosic fabrics during

manufacture of the fabric by treatment of the fabric with a composition comprising a ~~naturally complete fungal cellulase composition which comprises exo-cellobiohydrolase type component(s) and endoglucanase type component(s) wherein the improvement comprises modifying the naturally complete fungal cellulase composition to~~ comprising **at least 10 weight percent of endoglucanase type components based on the total weight of protein in the fungal cellulase composition and being free of all CBH I type cellulase components, wherein said non-cotton containing cellulosic fabric comprises jute, ramie, acetate derivatized cellulose or solvent-spun cellulose fibers.**"

"2. The method according to Claim 1 wherein said fungal cellulase composition is free of exo-cellobiohydrolase II type component."

"3. The method according to Claim 1 **or claim 2** wherein said fungal cellulase composition comprises at least about 20 weight percent of said endoglucanase type component(s) based on the total weight of protein in the cellulase composition."

"4. ~~An improved method for the treatment of a non cottoncontaining fabrics with an aqueous fungal cellulase solution wherein said method is conducted with agitation under conditions so as to produce a cascading effect of the cellulase solution over the fabric wherein said improvement comprises employing~~ **Use of a fungal cellulase composition which is comprising at least 10 weight percent of endoglucanase components based on the total protein weight in the fungal cellulase composition and being free of all exo-**

cellobiohydrolase **CBHI** type components, wherein the composition is used to treat a non-cotton containing cellulosic fabric comprising jute, flax, ramie, acetate derivatized cellulose or solvent spun cellulose fibers to enhance the feel and/or appearance and/or provide color enhancement of the fabric during manufacture."

~~"5. A method according to **The use of Claim 4** wherein said fungal cellulase composition is also free of exocellobiohydrolase II type components."~~

~~"6. A method according to **The use of Claim 4 or claim 5** wherein said fungal cellulase composition comprises at least about 20 weight percent of said endoglucanase type component(s) based on the total weight of protein in the cellulase composition."~~

~~"7. A non cotton containing cellulosic fabric having improved feel and/or appearance wherein said fabric is prepared by the method defined in **Claim 1**."~~

~~"8. A non cotton containing fabric having improved feel and/or appearance wherein said fabric is prepared by the method defined in **Claim 4**."~~

- IV. An opposition was filed against the patent on the grounds that:
- (a) its subject-matter extended beyond the content of the application as filed (Article 100(c));
 - (b) it did not disclose the invention in a manner sufficiently clear and complete for it to be

carried out by a person skilled in the art (Article 100(b) EPC); and,

- (c) the claimed subject-matter lacked novelty and an inventive step (Article 100(a) EPC) having regard to, respectively, D1 (WO-A-94/12578) and D3 (WO-A-93/05226), and D4 (US-A-5 246 853) in combination with any of D5 (WO-A-93/20278), D3, D6 (Concise Encyclopedia of Polymer Science and Engineering, John Wiley & Sons, 1990, pages 124 and 125) and D7 (Concise Encyclopedia of Polymer Science and Engineering, John Wiley & Sons, 1990, pages 960 to 962).

- V. The decision under appeal was based on the claims as granted (point III, *supra*) as well as on three auxiliary requests submitted with letter dated 19 October 2004.

The Opposition Division revoked the patent on the basis of reasoning which can be summarised as follows:

- (a) The subject-matter of Claims 1 to 6 as granted did not contain added subject-matter, so that the ground of opposition under Article 100(c) EPC did not prejudice maintenance of the patent.
- (b) Some objections underlying the ground of insufficiency of the disclosure under Article 100(b) EPC in fact were concerned with the determination of what fell under the scope of the claims, which was related to Article 84 EPC rather than to Article 83 EPC. Furthermore, the patent described the EG-type components as well as how to obtain fungal cellulase compositions substantially free of all CBH I type components, so that the

disclosure was sufficient. Therefore, also this ground of opposition did not prejudice maintenance of the patent.

- (c) As regards the ground of lack of novelty, D1, a document pursuant to Article 54(3) EPC 1973, did not clearly and unambiguously disclose a treatment of non-cotton containing fabrics with a cellulase composition that contained at least 10% endoglucanase (EG) and was free of all cellobiohydrolase (CBHI) components, so that it was not novelty destroying. However, the subject-matter of each of independent Claims 1 and 4 lacked novelty having regard to D4, assigned to the proprietors, which mentioned the use of rayon as substitute for cotton in its methods.
- (d) Moreover, still in view of the said mention in D4, it would be obvious to try to apply the method of D4 to the non-cotton cellulosic materials disclosed in the methods of biopolishing of cellulosic fabrics of D5 along with cotton containing materials. Thus, the subject-matter of Claims 1 and 4 did not involve an inventive step either.
- (e) The claims of the auxiliary requests comprised a disclaimer over D1 (read with D2) or over D2, that were not admissible under Article 123(2) EPC, nor under Rule 57a EPC 1973 either.
- (f) Therefore, the patent should be revoked.

VI. In their statement setting out the grounds of appeal, the patent proprietors (appellants) maintained the claims requests underlying the decision under appeal, enclosed copies of the following documents:
WO-A-92/06221 (page 11 and claims) and WO-A-92/06165

(page 21 and claims) and argued, in particular, in support of novelty and inventive step, *inter alia* by casting doubts on the disclosure of D4 based on the alleged common general knowledge illustrated by D8 (G. Buschle-Diller et al., "*Enzymatic Hydrolysis of Cotton, Linen, Ramie, and Viscose Rayon Fabrics*", Textile Research Journal, 64(5), 1994, pages 270-279).

VII. By letter dated 9 September 2005, the opponents (respondents) filed observations on the statement setting out the grounds of appeal, in which they maintained all of the grounds of opposition raised in the opposition proceedings. In particular, the opponents argued against novelty, having regard to D1 and D4, and inventive step, on the basis of D4 or D2, as the closest prior art document, in combination with any of D5, D3, D9 and D10, or on the basis of D5 in combination with D2.

VIII. In response to a communication of the Board in preparation for the oral proceedings, in which the Board *inter alia* had drawn attention to the question of whether or not the appeal had been substantiated with respect to any of the auxiliary requests, the parties reacted as follows:

The appellants maintained the claims as granted as their Main Request and submitted, by letter dated 22 May 2009 and faxed on the same day, further sets of amended claims as follows:

- (a) First to Fourth Auxiliary Requests (AR1 to AR4), in which, beyond a simplification of the language in Claim 1 and a reorganisation of Claim 4, respectively, all auxiliary requests AR1 to AR4

specified lyocell as the non-cotton fibres, AR2 additionally specified "softness" as the fabric enhancement, AR3 retained all the originally specified fabric enhancements but also specified agitation and cascading features of the process, and AR4 combined the features of AR2 and AR3;

- (b) "Supplementary" First to fourth Auxiliary Requests, which did not contain any simplification of the language in Claim 1 and reorganisation of Claim 4 , beyond the limitations as carried out in the First to Fourth Auxiliary Requests mentioned above.

In addition, the appellants maintained also the auxiliary requests underlying the decision under appeal, in view of the novelty objection over D1 maintained by the opponents, but withdrew their numbering.

With the said letter faxed on 22 May 2009 the appellants also provided further arguments on the issues to be addressed and submitted a copy of a further document, namely M. Claeys et al, *"Specificity mapping of cellulolytic enzymes: Classification into families of structurally related proteins Confirmed by Biochemical Analysis, Protein Science (1992), 1, 1293-1294, Cambridge University Press.*

The respondents maintained their grounds, objections and arguments as before and argued that the appeal had not been substantiated in respect of anything other than the Main Request.

IX. Oral proceedings were held on 25 June 2009, in which the issue of novelty, over D4 and D1, and the admissibility of the auxiliary requests filed on 22 May 2009 were discussed. After the Board had expressed the preliminary view that the language of a number of claims of the auxiliary requests had been improved in a way that was neither appropriate nor necessary for overcoming the grounds of opposition (Rule 80 EPC), the appellants withdrew the 1st to 4th Auxiliary Requests submitted with letter dated 22 May 2009 but maintained the "Supplementary 1st to 4th Auxiliary Requests.

X. Claim 1 of the Supplementary 1st Auxiliary Request reads as follows (additions to Claim 1 as granted emphasized in bold, deletions in strikethrough):

"1. A method for enhancing the feel and/or appearance and/or for providing color enhancement to a non-cotton containing cellulosic fabrics during manufacture of the fabric by treatment of the fabric with a composition comprising a fungal cellulase composition comprising at least 10 weight percent of endoglucanase type components based on the total weight of protein in the fungal cellulase composition and being free of all CBH I type cellulase components, wherein said non-cotton containing cellulosic fabric comprises ~~jute, ramie, acetate derivatized cellulose or solvent-spun cellulose~~ **lyocell** fibers."

Compared to Claim 1 according to the Supplementary 1st Auxiliary Request, Claim 1 of the Supplementary 2nd Auxiliary Request is directed to a method for enhancing the softness of a non-cotton containing cellulosic fabric comprising lyocell fibers.

Compared to Claim 1 according to the Supplementary 1st Auxiliary Request, Claim 1 of the Supplementary 3rd Auxiliary Request is additionally directed to a method wherein the treatment comprises contacting the fabric with an aqueous solution comprising the cellulase under conditions so that the solution is agitated and so that a cascading effect of the cellulase over the cotton-containing fabric (sic) is achieved.

Compared to Claim 1 according to the Supplementary 1st Auxiliary Request, Claim 1 of the Supplementary 4th Auxiliary Request is directed to a method for enhancing the softness of a non-cotton containing cellulosic fabric comprising lyocell fibers, wherein the treatment comprises contacting the fabric with an aqueous solution comprising the cellulase under conditions so that the solution is agitated and so that a cascading effect of the cellulase over the cotton-containing fabric (sic) is achieved.

XI. The arguments of the appellants, as far as they are relevant to the present decision, can be summarised as follows:

Main Request

(a) D4, like any other disclosure, had to be interpreted. It was not reasonable to simply refer to one of its statements and argue that what was literally disclosed therein was novelty destroying. In case of patents like D4, any relevant statement had indeed to be construed in the context in which

the statement appeared as well as in the context of the relevant common general knowledge. Hence, it was necessary to establish what was the common general knowledge at the date of the patent application, so that it was legitimate to try to show that common general knowledge by documents such as D8. Although D8 had been published just after the priority date of the patent in suit, it summed up the disclosure of older references, so that it was a review of the state of the art, and therefore it was representative of what was in the mind of the person skilled in the art reading D4. The conclusions of D8, invoked by the respondents, on the contrary could not be prior art. In order to understand the common general knowledge of the skilled person at the date of the patent in suit, D8 was more relevant than D1, which did not exemplify any materials other than cotton, and also more relevant than D10, which referred to Cellusoft, which was not an Endoglucanase composition as claimed. In any case, also D10 pointed to the importance of the substrate. Since D8 dealt with researches at University level with the objective of determining whether or not the previous findings for cotton were also valid for other cellulose materials such as linen, ramie and regenerated cellulose materials, it was also authoritative. A number of passages in D8 stated that the mechanism of enzymatic hydrolysis of cellulose materials was complicated and not yet fully understood, that variation in crystallinity, accessible surface area and pore dimensions of the fibre materials played a role as well as that there were major differences in the fine structure

and morphology of fibres such as cotton, linen, ramie and regenerated cellulose. Hence, D8 casts doubts on the possibility of applying the known enzymatic hydrolysis of cellulase on cotton-containing fibres to non-cotton containing cellulosic fibres, unless the skilled person carried out a research program on different substrates.

- (b) D4 was remarkably similar to the patent in suit but was directed to the treatment of "cotton-containing fabrics", apart from one passage mentioning regenerated cellulose such as rayon as a possible substitute for cotton. That passage in D4 was however nothing more than a speculation if taken outside its context in D4. The paragraph in which the passage appeared disclosed cotton fabrics made of pure cotton or cotton blends including non-cotton fibres as companion material. In this context the reference to rayon could only be understood as referring to a possible companion material in a cotton blend. Questioned by the Board on that point, the appellants argued that according to the patent in suit non-cotton containing fabrics could only mean fabrics that did not contain cotton. Thus, the skilled person reading the disputed passage of D4 in the light of the general knowledge as described in D8 would not understand that all the cotton could be replaced by non-cotton containing cellulosic fibres, so that he would not find in D4 a clear and unambiguous disclosure of a treatment of non-cotton containing fibres according to the meaning given in the patent in suit with a cellulase

containing EG and lacking CBHI components, as defined in the claims of the patent in suit. In fact, the patent in suit had disclosed for the first time the relation between CBHI components and reduced strength loss of the treated fabrics.

- (c) Therefore, contrary to the finding in the decision under appeal, the claimed subject-matter was novel over D4.

Supplementary First Auxiliary Request

- (a) It was justified to introduce a request in preparation for oral proceedings in which the appellants, in view of the concerns expressed by the Board, were asking for something narrower than what had been granted. The Boards of Appeal had not consistently adopted a strict view on the admissibility of those requests and generally allowed the possibility to defend a patent.
- (b) As regards the amendments, the limitation to "lyocell fibers" was fairly based on the application as filed so that it was not surprising. As to the link between "lyocell fibers" and the effect mentioned in Claim 1 of "color enhancement", it was implicit in the broader mention of appearance.
- (c) Therefore, the Supplementary First Auxiliary Request was admissible.

Supplementary Second to Fourth Auxiliary Requests

- (a) These requests contained the limitation to "lyocell fibers" and were progressively narrower in scope, in particular approaching Example 16 of the patent.
- (b) For the reasons stated above they were also admissible.

XII. The arguments of the respondents, as far as they are relevant to the present decision, can be summarised as follows:

Main Request

- (a) D8 did not represent common general knowledge as it had been published after the priority date of the patent in suit and was not a textbook. In any case, it was not more representative than D10 or D1. If D8 represented common general knowledge, it would *inter alia* disclose that regenerated cellulose was much simpler than natural fibres, i.e. cotton was much more complicated than rayon. Hence, D8 would make the disclosure of D4 meaningful. In general, D8 showed that it was known to use cellulase on cotton and non-cotton cellulosic fibres, as taught in D10.
- (b) Claim 1 of D4 used the same wording of Claim 1 according to the Main Request as regards the enzymatic composition, i.e. D4 unambiguously disclosed the same cellulase composition mentioned in Claim 1 of the Main Request. The key difference from D4, which concerned cotton-containing fibres,

was the application of the composition to non-cotton containing cellulosic fabrics. However, D4 also stated in a passage of its description that in its methods cotton could be replaced by regenerated cellulose such as rayon. As evidenced by D7, rayon was a solvent spun fibre, which thus fell under the expression "solvent spun cellulose fibre" defined in Claim 1 of the Main Request. In the invoked passage of D4, the term "it was contemplated" meant "to intend" and the word "substitute" confirmed the complete replacement of cotton in the methods of D4 and could not relate to a companion material to be used in cotton blends. Hence, D4 was novelty destroying. The argument of the appellants, according to which the passage of D4 was a mere speculation rather than a clear and unambiguous disclosure, was not convincing. Throughout the entire patent in suit, the word "contemplate" was used to refer to embodiments of the alleged invention, and the patent was a copy of D4. Also, a number of passages including the term "contemplated" had been used as a fair basis for the amendments made. Hence, it was not reasonable that "contemplated" embodiments might be a basis for the amendments but not a direct disclosure thereof. As regards the arguments on "expectation of success", they were not required for assessing novelty. In the present case, the skilled person reading D4 would have seriously contemplated using rayon instead of cotton.

- (c) Therefore, the claimed subject-matter lacked novelty over D4, as in the decision under appeal, so that the patent as granted should remain revoked.

Supplementary First Auxiliary Request

- (a) This request had been filed very late and not in compliance with the Rules of Procedure of the Boards of Appeal (RPBA) then applicable. Since the reason adduced for the late filing was to address the issues raised by the Board in their communication, in particular regarding novelty with respect to D4, and since D4 had been dealt with in the decision under appeal, the request could have been filed earlier. Hence, the late filing was not justifiable and the request should not be admitted.

- (b) If the lateness were justifiable, the nature of the amendment posed problems. The amendment consisted in a feature taken from the description (lyocell), which went beyond the review of the decision under appeal. The respondents and the Board were confronted with a completely new situation that was not foreseeable. In particular, the respondents had not got enough time to carry out a complete search of prior art. On the basis of the material already found, the search appeared very promising. Hence, it was not clear yet whether the prior art for assessing novelty and inventive step was available to the Board and the parties. In summary, it was not apparent that that late filed request could be dealt with at the oral proceedings.

- (c) Nevertheless, if the request was admitted, the respondents' preference was for a discussion of the case before the Board, without remittal, which would engender considerable delay. The respondents

however reserved their right to file further evidence to show that the limitation to lyocell fibres in any case was not inventive.

Supplementary Second to Fourth Auxiliary Requests

- (a) The arguments against the admissibility of the Supplementary First Auxiliary Request applied *mutatis mutandis* to the further supplementary auxiliary requests.

XIII. The appellants (patent proprietors), at the oral proceedings, requested that the decision under appeal be set aside and as main request that the patent be maintained as granted or as auxiliary requests that the patent be maintained on the basis of the 1st, 2nd, 3rd or 4th Supplementary Auxiliary Request filed on 22 May 2009 or on the basis of one of the auxiliary requests decided on by the opposition division.

XIV. The respondents (opponents), at the oral proceedings, requested that the appeal be dismissed.

XV. At the end of the oral proceedings held on 25 June 2009 the decision was announced.

Reasons for the Decision

1. The appeal is admissible.

Main Request (Claims as granted)

Novelty

2. The patent has been revoked for lack of novelty having regard to the disclosure of D4.
 - 2.1 D4 is the specification of a US patent assigned to the proprietors of the patent in suit and mentioning the same inventors as in the patent in suit.
 - 2.2 The disclosure of D4 concerns a method for enhancing the feel and/or appearance and/or for providing color enhancement and/or a stone washed appearance to cotton-containing fabrics during manufacture of the fabric by treatment of the fabric with a composition comprising a naturally complete fungal cellulase composition which comprises exo-cellobiohydrolase I component and endoglucanase component(s) wherein the naturally complete fungal cellulase composition has been modified to comprise at least 10 weight percent of endoglucanase components based on the total weight of protein in the fungal cellulase composition and to be free of the exo-cellobiohydrolase I component (Claim 1). That fungal cellulase composition can be also free of exo-cellobiohydrolase II components (Claim 2). Furthermore, the fungal cellulase composition can comprise at least about 20 weight percent of said endoglucanase component(s) based on the total weight of protein in the cellulase composition (Claim 3).

- 2.3 It is apparent from the above that D4 concerns a method in which the same cellulase composition as that defined in the claims of the patent in suit is used, however on cotton-containing cellulosic fabrics.
- 2.4 The meaning of the expression "cotton-containing cellulosic fabric" is illustrated in a paragraph of D4 (column 4, lines 40-59). In the last sentence of that paragraph (column 4, lines 57-59), it is stated that it is contemplated that regenerated cellulose such as rayon could be used as a substitute for cotton in the methods described in D4.
- 2.5 In the decision under appeal, the finding of lack of novelty expressly relied on that passage of D4, which is crucially in dispute also in the appeal proceedings. Hence, the invoked and contested passage in D4 has to be construed to establish its content. For that purpose, the entire paragraph in which the mentioned passage is inserted is reproduced in order to make apparent the situation (context) in which the statement appears.
- 2.6 The paragraph of D4 in column 4, lines 40-59, reads as follows:

"The term "cotton-containing fabric" refers to sewn or unsewn fabrics made of pure cotton or cotton blends including cotton woven fabrics, cotton knits, cotton denims, cotton yarns and the like. When cotton blends are employed, the amount of cotton in the fabric should be at least about 40 percent by weight cotton; preferably, more than about 60 percent by weight cotton; and most preferably, more than about 75 percent by

weight cotton. When employed as blends, the companion material employed in the fabric can include one or more non-cotton fibers including synthetic fibers such as polyamide fibers (for example, nylon 6 and nylon 66), acrylic fibers (for example, polyacrylonitrile fibers), and polyester fibers (for example, polyethylene terephthalate), polyvinyl alcohol fibers (for example, Vinylon), polyvinyl chloride fibers, polyvinylidene chloride fibers, polyurethane fibers, polyurea fibers and aramid fibers. It is contemplated that regenerated cellulose, such as rayon, could be used as a substitute for cotton in the methods of this invention."

- 2.7 The first sentence of that paragraph illustrates the extension of the term "cotton-containing fabric". As regards the material "cotton", it includes pure and blended cotton. As to the article "fabric", it encompasses not only "woven fabrics", "knits" and "denims" but also yarns (which are possibly elements or components of fabrics, not fabrics as such) and "the like" (which is unspecified as to what it is). Hence, the term "cotton-containing fabric" encompasses but is not limited to cotton-containing articles in form of fabrics.
- 2.8 The second sentence specifies the amount of cotton that may be present, if cotton blends are employed. In particular, at least 40% by weight is a mandatory minimum content. Hence, cotton may be the minor component of the blend.
- 2.9 The next sentence specifies the companion material that may be blended with cotton, if cotton blends are employed. In particular, the companion material may be

a "non-cotton". Since both "non-cotton cellulosic materials" and "non-cellulosic materials" are "non-cotton", they are encompassed by the broad definition and may be used in the blends. The "non-cotton cellulosic materials" are not further specified, but it is known that "naturals" such as jute, linen, ramie and "chemically regenerated or reconstituted" such as rayon and lyocell are all encompassed by the broad term "non-cotton cellulose". As regards the "non-cellulosic materials", they may be synthetic such as (i.e. not limited only to those mentioned) those listed (polyamides, acrylics, polyesters, polyvinyl alcohol, polyvinyl chloride, etc.). Hence, non-cotton cellulosic and non cellulosic materials may be blended with cotton.

2.10 Finally, the last sentence, the passage in dispute, states that in the methods of the invention described in D4, cotton may be substituted with regenerated cellulose such as rayon. Hence, also the material "cotton" as such may in fact be replaced, to any extent, by regenerated cellulose such as rayon. Therefore, the methods of D4 extend beyond the treatment of the mere material "cotton" and encompasses the treatment of cellulosic materials such as regenerated cellulose, e.g. rayon.

2.11 It is apparent from the above that throughout the paragraph, in which the passage in dispute is inserted, the writer of the patent specification consistently aims at illustrating that the extension (what is encompassed thereby) of application of the methods, despite of the expression "cotton-containing fabric", goes well beyond the article "fabric" and the material "cotton".

- 2.12 Since no contradiction is apparent in the entire paragraph, which indeed is rather consistent as explained above, the skilled person has no reason to doubt that in the methods according to D4 the replacement of cotton with regenerated cellulose such as rayon is an accepted and disclosed possibility. Consequently, consideration of the common general knowledge of the skilled person reading D4, as invoked by the appellants, does not appear to be necessary in the present case.
- 2.13 On the other hand, if it were necessary to consider the common general knowledge of the skilled person, D8, relied upon by the appellants, would anyhow be unsuitable, for the following reasons:
- (a) it has been published after the priority date of the patent in suit;
 - (b) it is not an encyclopaedia, textbook, dictionary or a handbook (Case Law of the Boards of Appeal of the EPO, 5th edition 2006, I.C.1.5);
 - (c) the field of the patent in suit is not a new field of research in which special considerations prevail because the technical knowledge is not yet available from textbooks (Case Law, *supra*, *idem*);
 - (d) D8 concerns a research carried out in a university, it has to do with the knowledge of university researchers, which is possibly higher than that which could be expected from the person skilled in the art of textile treatments.
- 2.14 Furthermore, even considering the content of D8, it generally discloses that "*The mechanism of enzymatic hydrolysis of cellulosic materials is complicated and*

not yet fully understood [10, 12, 29]" (page 270, left column, first sentence of the last paragraph) but then specifically mentions that "*Regenerated cellulose, on the other hand, are much simpler systems than natural cellulose fibers. A textile rayon such as the one we used here has considerably lower degrees of polymerization [18], cristallinity [5], and orientation [13] than cotton*" (page 27, left column, lines 6-10). Hence, even if the information in D8 as relied on by the appellants (mechanism not fully understood, hence no direct transposability of enzymatic hydrolysis from cotton to non-cotton) could be treated as being representative of the common general knowledge of the person skilled in the art, there is nothing in D8 which could cause the skilled person to have any doubts that the suggestion in D4 that regenerated cellulose can be treated as well as cotton is meant seriously. In fact, at least the specific disclosure concerning the more simple structure of rayon (*supra*) and, in particular, also the conclusions of D8, according to which "*Enzymatic hydrolysis to decrease stiffness, ease stretchability, and generally loosen structure of fabrics is applicable to all the cellulosic fabrics in this study. After short treatment periods, the cotton, linen and ramie fabrics manifest the desired effect of removal of surface fibrils without suffering large weight losses or reductions in tensile strength*" (page 278, left column, first two sentences of the last paragraphs), relied upon by the respondents, overwhelmingly contradict the conclusion of the appellants based on the general disclosure of D8. Therefore, the skilled person would not be put off by D8, even if it represented his common general knowledge, from applying the possible replacement mentioned in D4.

- 2.15 Indeed, in the reasoning of the appellants concerning the doubts and thoughts of the person skilled in the art reading D4, on whether or not to apply the stated possibility, the Board sees elements of analysis pertaining to the problem solution approach (whether a "cautious" skilled person would implement the teaching of the contested passage of D4) rather than to novelty. In particular, the notion of "cautiousness" does not pertain to the skilled person assessing novelty, who has to answer the question whether or not a given subject-matter is directly and unambiguously disclosed e.g. in a document.
- 2.16 It follows from the above analysis that D4 does indeed directly and unambiguously disclose the substitution of cotton with regenerated cellulose such as rayon in its methods. Since it has not been disputed that rayon falls under the non-cotton containing cellulose listed at the end of granted Claim 1, the inevitable result of that substitution is a method as defined in Claim 1 as granted, the subject-matter of which, consequently, lacks novelty (Article 54 EPC).
- 2.17 Hence, after reviewing the decision under appeal, the Main Request remains not allowable.
- 2.18 In view of that decision on the Main Request, the Board need not decide whether or not D1 is novelty destroying, nor whether in any of the auxiliary requests decided on by the Opposition Division, which differ from the Main Request only in the disclaimers, the disclaimers over D1 and/or D2 are allowable.

First to Fourth Auxiliary Requests (Supplementary)

Procedural matters

3. The appeal lies from a decision revoking the patent in suit.
- 3.1 In their statement setting out the grounds of appeal, the proprietors appellants had stated that "the claims requests at this stage remain the same as those before the OD" (OD = Opposition Division) (page 4, penultimate paragraph). Since novelty over D1 had been acknowledged in the decision under appeal, i.e. the disclaimers contained in the auxiliary requests were not admissible under Article 123(2) EPC, it is apparent that the appellants substantially relied only on the Main Request underlying the decision under appeal, i.e. on the claims as granted, the auxiliary requests not being meant to address lack of novelty with respect to D4, but only being possibly relevant in appeal proceedings if at any stage a different decision were taken with respect to novelty over D1.
- 3.2 Despite the possibility that the review of the decision under appeal by the Board might confirm the finding of lack of novelty and/or inventive step having regard to D4, the appellants thus deliberately decided not to submit any further request aimed at overcoming this objection at the beginning of the appeal proceedings.
- 3.3 At the dates of filing of, respectively, the notice and the statement setting out the grounds of the present appeal (2 March 2005 and 6 May 2005), the then applicable Rules of Procedure of the Boards of Appeal

(RPBA) of the EPO were those which entered into force on 1 May 2003 (OJ 3/2003, 89), with an amended Article 10a(2) RPBA with effect from 1 January 2005 (OJ 11/2004, 541) reading as follows: "*The statement of grounds of appeal and the reply shall contain a party's complete case*" and "*They shall set out clearly and concisely the reasons ... and should specify expressly all the facts, arguments and evidence relied on.*". Also, according to Article 10b(1) RPBA, "*Any amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and considered at the Board's discretion. The discretion shall be exercised in view of inter alia the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy*". Hence, in relying on the requests filed before the Opposition Division, the appellants must be taken as being aware of the possible consequences incurred by their procedural behaviour before the Board.

3.4 The supplementary auxiliary requests were filed only in response to a communication of the Board in preparation for oral proceedings (letter dated 22 May 2009), i.e. after the filing of the grounds of appeal and after oral proceedings had been arranged. Hence, those requests are late filed and to be admitted only at the discretion of the Board.

3.5 According to Article 10b(3) RPBA, "*Amendments sought to be made after oral proceedings have been arranged shall not be admitted if they raise issues which the Board or the other party or parties cannot reasonably be expected to deal with without adjournment of the oral proceedings*".

- 3.6 Compared to the claims as granted (point III, *supra*), Claim 1 of Supplementary First Auxiliary Request, *inter alia* contains the amendment "comprises lyocell fibers".
- 3.7 During the oral proceedings, that amendment raised a number of questions, *inter alia*: whether or not a fair basis is provided in the application as filed for the amendment as such and for the combination of "lyocell fibers" and "providing color enhancement". Also, since the amendment was neither defined in the claims as filed nor in those as granted (points II and III, *supra*), the question arose whether or not treatments on "lyocell fibers" had been searched. In that respect, the respondents pointed out that they had in fact commissioned a further search, which had not been completed yet but which anyhow appeared to be promising, so that they envisaged to file further evidence if the requests were admissible.
- 3.8 The new claims represent a situation never examined before and going beyond the review of the decision under appeal. Although during the oral proceedings before the Board, the parties stated that the adversarial character of the discussion on the points to be addressed could nevertheless be maintained, doubts were cast on the allowability of the amendments as well as on whether the existing search was adequate. Thus, adjournment of the oral proceedings or remittal for further prosecution might be necessary. However, the current state of the proceedings (e.g. the age of the case and of the patent) as well as the need for procedural economy are against adjournment or remittal.

- 3.9 The feature "comprises lyocell fibres" has been taken from the description; there is only one example in the description that illustrates the treatment on a 100% lyocell fibre fabric, wherein only some of the effects defined in the claims are mentioned; so apart from the doubts cast on the allowability of the amendments in the requests, it was not certain whether or not that specific subject-matter had ever been searched.
- 3.10 The Board thus considered that no satisfactory examination of the supplementary auxiliary requests could take place during the oral proceedings, and that since in the present case the late submission of the Supplementary First Auxiliary Request by the appellants clearly does not comply with the provisions of the RPBA (*supra*), its discretion should be exercised to refuse to admit the late filed Supplementary First Auxiliary Request into the proceedings.
- 3.11 Since the Supplementary Second to Fourth Auxiliary Requests also contain the amendment "comprises lyocell fibers", those requests were not admitted into the proceedings for the same reasons.
4. Consequently, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

S. Fabiani

S. Perryman