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**Datasheet for the decision
of 15 November 2007**

Case Number: T 1559/05 - 3.4.02

Application Number: 97301686.8

Publication Number: 0797088

IPC: G01N 21/25

Language of the proceedings: EN

Title of invention:

Microplates with UV permeable bottom wells and methods of making same

Patentee:

Corning Costar Corporation

Opponent:

Greiner Bio-One GmbH

Headword:

-

Relevant legal provisions:

EPC Art. 123(2)

Keyword:

"Disclaimer originally disclosed (no)"
"Disclaimer allowable - (no)"

Decisions cited:

G 0001/03, T 1050/99

Catchword:

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Case Number: T 1559/05 - 3.4.02

D E C I S I O N
of the Technical Board of Appeal 3.4.02
of 15 November 2007

Appellant: Corning Costar Corporation
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Respondent: Greiner Bio-One GmbH
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 21 October 2005
revoking European patent No. 0797088 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: A. Klein
Members: F. Maaswinkel
C. Rennie-Smith

Summary of Facts and Submissions

- I. European patent No. 0 797 088 (based on application No. 97301686.8) was revoked by the decision of the opposition division dated 21 October 2005.

- II. On 21 December 2005 the patent proprietor filed an appeal against this decision and paid the appeal fee on the same day. In the statement setting out the grounds of appeal received on 28 February 2006 the appellant requested that the decision of the opposition division be set aside and that the patent be maintained on the basis of the set of claims of the new main request filed therewith or, as auxiliary request, that oral proceedings be arranged.

- III. In its reply received on 3 July 2006 the respondent requested that the appeal be dismissed and also, as auxiliary request, oral proceedings.

- IV. In a summons pursuant to Rule 71(1) EPC sent on 26 June 2007 the board invited the parties to oral proceedings to take place on 15 November 2007.

- V. In a letter dated 22 October 2007 and filed by facsimile on the same day the appellant stated that it would not attend the oral proceedings. Furthermore it was maintained that the appeal should be allowed for the reasons set out in the statement of grounds of appeal and that its new main request should be remitted to the opposition division for further consideration in relation to Article 56 EPC.

VI. In a letter dated 5 November 2007 and received by facsimile on the same day the respondent announced that it would not attend the oral proceedings.

VII. The wording of claim 1 reads as follows:

"A microplate for use in assaying samples, comprising:

a frame that forms sidewalls of at least one well;
and

a first layer that forms a bottom of the at least one well, the first layer being formed from a plastic material having an average optical density that is no more than approximately 0.09 at a thickness of approximately 7.5 mils between wavelengths of approximately 200 nm and approximately 300 nm, with the proviso that said plastic material is not TPX® 4-methylpentene-1 polymer from Mitsui Petrochemical Industries, Japan".

Claims 2 to 20 are dependent claims.

VIII. The arguments of the appellant may be summarised as follows:

Claim 1 of the new main request is based upon claim 1 of the first auxiliary request considered by the opposition division during oral proceedings, which included the proviso that: "said plastic material is not 4-methylpentene-1 polymer". By means of this disclaimer the applicant sought to distinguish the present invention from the disclosure in US-A-5,487,872 (document D2) which had been acknowledged in paragraph [0007] of the patent specification. According to the

opposition division the disclaiming of any 4-methylpentene-1 polymer material was not specifically disclosed in the application as originally filed and was therefore objectionable under Art. 123(2) EPC because it did not comply with any of the conditions set out in Enlarged Board of Appeal Decision G 1/03, namely, document D2 did not form part of the state of the art under Article 54(3) and (4) EPC and was not an accidental anticipation, nor was the disclaimer's subject-matter excluded from patentability for non-technical reasons. For this reason claim 1 of the present main request differs from claim 1 of the first auxiliary request considered by the opposition division insofar as the proviso now requires that: "said plastic material is not TPX® 4-methylpentene-1 polymer from Mitsui Petrochemical Industries, Japan". The basis for this expression is found in paragraph [0007] of the granted patent specification where it is stated that:

"U.S. Patent No. 5,487,872 to Hafeman et al. (Hafeman) discloses a microplate designed for assaying samples with UV absorption techniques. Hafeman discloses a variety of materials from which the bottom surface of the microplate wells may be formed, including TPX® 4-methylpentene-1 polymer as the preferred material (Mitsui Petrochemical Industries, Japan). However, it is believed that microplates using this material for the well bottom may have limited sensitivity in certain biochemical experiments. For example, in nucleic acid studies, UV absorption in a range between approximately 260 nm to approximately 280 nm is studied, but TPX® has a relatively high optical density in this wavelength range".

It is the appellant's submission that the disclaimer in claim 1 of its new main request overcomes the deficiencies noted by the opposition division, insofar as it is now relates solely to the material disclosed in paragraph [0007] of the patent. In particular, the disclaimer in claim 1 of its new main request now requires that: "said plastic material is not TPX® 4-methylpentene-1 polymer from Mitsui Petrochemical Industries, Japan". Since the wording of the disclaimer in claim 1 is closely based upon paragraph [0007] of the patent, it is contended that such an amendment fully complies with the requirements of Article 123(2) EPC. Moreover, since the basis for the amendment to claim 1 was disclosed in the application as filed, it is not an "undisclosed disclaimer" and, accordingly, Enlarged Board of Appeal Decision G 1/03 is not relevant.

IX. The arguments of the respondent may be summarised as follows:

The amendment in claim 1 that the "...plastic material is not TPX® 4-methylpentene-1 polymer from Mitsui Petrochemical Industries, Japan" does not have a basis in the original application documents: rather, according to page 3, first paragraph of the original description, any plastics material having the required optical density in the wavelength range of 200 nm to 300 nm may be used in fabricating the microplates. On page 6, lines 16 to 24, numerous examples of suitable materials are listed which can be used in the invention, amongst which are polymethylpentenes (line 20). Now TPX® 4-methylpentene-1 polymer from Mitsui Petrochemical Industries is a polymethylpentene

material. Therefore the original application documents disclose exactly the contrary of the appellant's assertion, since polymethylpentenes are explicitly disclosed as being a material suitable for use in the invention. It follows that the original application documents do not disclose at all that the disclaimer now introduced in claim 1 would not have been included in the invention as originally disclosed; therefore this disclaimer does not have a basis in the original application documents. With respect to the appellant's reference to paragraph [0007] of the patent specification, it is noted that this passage merely represents an acknowledgement of the prior art document D2. As a rule such a discussion is not to be seen as a disclosure of the technical teaching of the invention. In particular in this paragraph it is only discussed that microplates made of TPX® material might have limited sensitivity in certain biochemical experiments, for instance in the wavelength range 260 nm to 280 nm where it has a relatively high optical density. However, from this it cannot be inferred that TPX® 4-methylpentene-1 polymer from Mitsui Petrochemical Industries, Japan is to be excluded from protection, since neither the original application documents nor present claim 1 relate to a microplate for which only the UV-absorption range between 260 nm and 280 nm is relevant. Rather, claim 1 relates to microplates of which the bottom wells are made of a material which should have a certain average optical density in the range of 200 nm to 300 nm. As a matter of course TPX® material shows this optical thickness as an average value for the wavelength range 200 nm to 300 nm, even if it might have some relatively higher optical density for the sub-interval 260 nm to 280 nm. Furthermore on

page 2, last para of the original description (paragraph [0009] of the patent specification) it is clearly stated that the underlying technical problem was to provide microplates that are relatively inexpensive, comparatively durable and include bottoms having an acceptable optical density across the entire useful range of the UV spectrum, i.e. between 200 nm and 300 nm. The skilled person would undoubtedly consider the use of TPX® material for solving this technical problem, in particular since polymethylpentenes are disclosed as examples of UV permeable materials "suitable for use in the present invention" (page 6, lines 16 to 20 of the original description). Therefore the amendment in claim 1 is a disclaimer which is not disclosed in the application as filed.

For such an undisclosed disclaimer the criteria laid down in the Decision G 1/03 apply. According to Headnote II.3 and the Reasons of this Decision a disclaimer which is or becomes relevant for the assessment of inventive step adds subject-matter contrary to Article 123(2) EPC. In its statement of grounds of appeal, pages 7 and 8, the appellant has explained that this disclaimer had been introduced in order to establish novelty over the disclosure of D2. On page 9 of the grounds of appeal under the heading "Article 56 EPC", D2 is discussed as being relevant for the question of inventive step. On page 13, line 6 of this letter the appellant acknowledges that document D2 is considered as the closest prior art for the issue of inventive step. This is in accordance with the views of the opposition division in its communications of 19 January 2004 and 9 March 2006 and with the

respondent's prior submissions in which it was argued that document D2 alone renders the teaching of the patent obvious.

The respondent concluded that the disclaimer does not meet the criteria for allowability set out in Decision G 1/03 and is therefore objectionable under Article 123(2) EPC. Accordingly, the appeal should be dismissed.

Reasons for the Decision

1. The appeal is admissible.
2. *Amendments*
 - 2.1 *Article 123(2) EPC*
 - 2.1.1 Claim 1 of the amended main request includes the new feature with respect to claim 1 of the granted patent "... with the proviso that said plastic material is not TPX® 4-methylpentene-1 polymer from Mitsui Petrochemical Industries, Japan". According to the appellant, the new wording is intended to overcome an objection in the decision under appeal against claim 1 of the prior auxiliary request, which included the feature "...with the proviso that said plastic material is not 4-methylpentene-1-polymer". The opposition division had found the claim including this expression to be objectionable under Article 123(2) EPC, because it was considered a disclaimer which was not disclosed in the application as filed. With reference to Decision G 1/03 this disclaimer was not allowable, since its

introduction in the claim was not justified by one of the exceptions listed in Headnote II.1 of this Decision.

- 2.1.2 The appellant has argued that there is a basis for the new feature in the original application documents, in particular the passage on page 2, lines 14 to 21 (the corresponding passage of the granted specification being reproduced in Section VIII supra). According to the appellant, since the basis of the amendment to claim 1 was disclosed in the application as filed it was not an "undisclosed disclaimer" and in the present case the Decision G 1/03 therefore did not apply.
- 2.1.3 The board concurs with the appellant that in that passage of the application as filed the new feature in claim 1 (in the following abbreviated as "TPX® material") is disclosed *as such*. However, the pertinent question is whether a skilled person, reading the original application documents in their entirety, would unequivocally have understood that the TPX® material is actually disclaimed, i.e. that this material is excluded from the protection sought in the claims.
- 2.1.4 According to the Section "Field of the Invention", page 1 of the original description, the invention relates specifically to microplates that have UV permeable bottom wells. On the same page, line 16, in the Section "Background of the Invention" it is explained that the UV region of the electromagnetic spectrum, where UV absorption spectroscopy may be used, extends from 200 nm to 400 nm. On page 2, lines 14 to 21 it is disclosed in the context of acknowledging document D2 that TPX® material has a relatively high optical density in the wavelength range 260 nm to

280 nm (also illustrated in Figure 4c). In the concluding sentence of this Section the aim of the invention is expressed as "to provide a microplate that is relatively inexpensive, comparatively durable and includes well bottoms having an acceptable optical density across the entire useful range of the UV spectrum". This is expressed in more detail in paragraph 1 of the Section "Summary of Invention" (which corresponds to claim 1 as filed) according to which one embodiment of the invention includes a microplate comprising "a first layer formed from a plastic material having an average optical density no more than approximately 0.09 at a thickness of approximately 7.5 mils between wavelengths of approximately 200 nm and approximately 300 nm".

2.1.5 It is noticeable that, because of the multiple use of the word "approximately", the independent claim in the application as filed does not define precise boundaries, neither for the optical density nor for the layer thickness or the respective upper and lower end values of the wavelength range. The skilled person would therefore have consulted the detailed description in order to assess the values of average optical density, layer thickness and wavelength range at which the invention could successfully be carried out.

2.1.6 In the decision under appeal this issue was addressed in the Section II.2 "Interpretation of the claims", where it was concluded that, taking into account all supplementary information of numerical values in the patent application documents and the submissions of the applicant during the proceedings, the wavelength end points approximation involved a tolerance of at least

20% and the thickness and optical density approximations involved a tolerance in the order of at least 50%.

2.1.7 Furthermore, construing claim 1 to include these tolerance values the opposition division found that document D2 disclosed directly and unambiguously that the layer forming the bottom of the microplate had an average specific optical density within the claimed range (Section "Novelty"). In its statement of grounds of appeal, Section 3.2 ("Article 69 EPC") the appellant conceded that this finding of the opposition division was not subject to appeal.

2.1.8 It follows that the skilled person, reading the original patent application as a whole, would have understood that the TPX® material did indeed, in spite of a somewhat less optimum optical density in the sub-wavelength range of 260 nm to 280 nm mentioned at the beginning of the description, meet the prescriptions of average approximate optical density at an approximate thickness in the approximate wavelength range and that the invention could therefore be successfully carried out using this material. Furthermore, he would be confirmed in this assessment by the fact that the generic class of polymethylpentenes is listed as one example of UV permeable materials suitable for use in the invention (page 6, line 20 of the original description) and that TPX® material belongs to this class.

2.1.9 Therefore, although the appellant is correct that there is a disclosure in the original patent application for the material "TPX® 4-methylpentene-1 polymer from

Mitsui Petrochemical Industries, Japan", the application documents do not disclaim the use of this material: indeed the skilled person observes that, apart from the relatively higher optical density between 260 nm and 280 nm of a 14 mil thick piece of TPX® material shown in Figure 4c (which for a sheet thickness of 7.5 mils would be reduced accordingly) the average approximate behaviour of this material between the wavelengths of interest meets the prescriptions disclosed in the patent application and being included as essential features in the independent claim.

2.1.10 The new feature in claim 1 of the appellant's main request is therefore a disclaimer not previously disclosed in the application as filed (following Decision T 1050/99).

2.2 For such a disclaimer the ruling of Decision G 1/03 applies.

2.2.1 According to Headnotes II and II.1 of this Decision,

"II. The following criteria are to be applied for assessing the allowability of a disclaimer which is not disclosed in the application as filed:

II.1 A disclaimer may be allowable in order to:

- restore novelty by delimiting a claim against state of the art under Article 54(3) and (4) EPC;
- restore novelty by delimiting a claim against an accidental anticipation under Article 54(2) EPC; an anticipation is accidental if it is so unrelated to and remote from the claimed invention that the person

- skilled in the art would never have taken it into consideration when making the invention; and
- disclaim subject-matter which, under Articles 52 to 57 EPC, is excluded from patentability for non-technical reasons".
- 2.2.2 As set out in point 2.1 supra, the board finds that the new expression in claim 1 was not disclosed in the application as filed as a disclaimer. Hence the conditions of Headnote II are valid.
- 2.2.3 With respect to the conditions set by the Enlarged Board for allowability of the disclaimer (Headnote II.1) it is noted:
- i) document D2 is not state of the art under Article 54(3) and (4) EPC, therefore the first condition of allowability of the disclaimer does not apply;
 - ii) document D2 is not an "accidental anticipation" under Article 54(2) EPC, because, as has also been conceded by the appellant, it represents the closest prior art for the question of patentability. Therefore the second condition is not met, either.
 - iii) the disclaimed subject-matter (TPX® material) is not excluded from patentability under Articles 52 to 57 EPC for non-technical reasons.
- 2.2.4 It is concluded that in the present case the disclaimer in claim 1 is not allowable.
3. Since claim 1 of the appellant's single request is not allowable, the whole request is not admissible.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

M. Kiehl

A. G. Klein