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**Datasheet for the decision
of 28 June 2007**

Case Number: T 0803/05 - 3.3.06

Application Number: 95922820.6

Publication Number: 0765183

IPC: B01D 15/08

Language of the proceedings: EN

Title of invention:

A chromatography column

Patentee:

GE Healthcare Bio-Sciences AB

Opponent:

BIA Separations D.O.O.

Headword:

Abutment surface/GE HEALTHCARE

Relevant legal provisions:

EPC Art. 54

Keyword:

"Novelty (no): interpretation of the unclear claim in the light of the description - all features disclosed in prior art document"

Decisions cited:

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Catchword:

-



Case Number: T 0803/05 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 28 June 2007

Appellant: GE Healthcare Bio-Sciences AB
(Patent Proprietor) S-751 84 Uppsala (SE)

Representative: Rollins, Anthony John
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Respondent: BIA Separations D.O.O.
(Opponent) Teslova 30
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Representative: Meyers, Hans-Wilhelm
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 27 April 2005
revoking European Patent No. 0765183 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: P.-P. Bracke
Members: L. Li Voti
A. Pignatelli

Summary of Facts and Submissions

I. The present appeal is from the decision of the Opposition Division to revoke the European patent no. 0 765 183, concerning a chromatography column.

The European patent was granted with a set of 8 claims, claim 1 of which reading as follows:

" 1. A liquid chromatography column comprised of a column tube including a chromatographic matrix, liquid flow inlet means and a liquid flow outlet means, characterised in that the matrix is monolithic and porous, and wherein said column has a distributor (3,7) located adjacent the inlet means (5) for distributing the incoming liquid and a liquid accommodating gap between the matrix (2) and the abutment surface of the distributor (3,7), which gap (8) is devoid of matrix material (2)."

Dependent claims 2 to 5 relate to particular embodiments of the chromatography column of claim 1, claims 6 and 7 to a method of assembling a chromatography column having the characteristics above and claim 8 to the use of such a column.

II. In its notice of opposition the Opponent sought revocation of the patent *inter alia* on the grounds of Article 100(a) EPC, because of lack of novelty of the claimed subject-matter.

The Opponent supported its arguments on documents

(1): DE-A-4118501 and

(2): D. Josić et al.: " High-performance membrane chromatography of serum and plasma membrane proteins", Journal of Chromatography, 590(1992), pages 59 to 76,

and on the prior use of the product "Quick Disk", illustrated by the photographs (3a) and (3b), the price list (3c) and the affidavits by Mr. Josić and Mr. Reusch, both of them submitted with letter of 04 February 2005.

III. In its decision, the Opposition Division found *inter alia* that

- document (1) disclosed a liquid chromatography column comprising a column tube including a chromatographic matrix which was a polymeric membrane disc, liquid flow inlet means, liquid flow outlet means and a distributor located adjacent the inlet means for distributing the incoming liquid;
- the polymeric membrane disc used in document (1) was a monolithic and porous matrix as required in claim 1 of the patent in suit;
- the lower surface of the distributor described in document (1) had channels engraved thereon containing liquid flow outlet holes, the rest of the lower surface of the distributor being in contact with the upper surface of the chromatographic matrix; therefore, the empty volume existing between the inner surface of the channels and outlet holes and the upper surface of

the matrix was a liquid accommodating gap devoid of matrix material;

- however, the inner surface of these channels and outlet holes could never abut the upper surface of the matrix and thus could not be regarded as being part of the abutment surface of the distributor as required in claim 1;
- therefore, document (1) did not disclose directly and unambiguously a liquid accommodating gap between the abutment surface of the distributor and the upper surface of the matrix;
- however, a liquid chromatography column comprising all the features of claim 1 had been rendered available to the public under the name "Quick Disk";
- therefore, the claimed subject-matter lacked novelty.

IV. An appeal was filed against this decision by the Patent Proprietor (Appellant).

With the letter of 25 May 2007 the Appellant informed the Board that it will not attend the oral proceedings scheduled on 28 June 2007.

Oral proceedings were held before the Board on 28 June 2007 in the presence of the Respondent (Opponent) only.

V. The Appellant submitted in writing that

- the prior use of the product "Quick Disk" had not been convincingly proven;
- moreover, the Patent Proprietor's right to a fair hearing had not been respected during the discussion of the alleged prior use at the oral proceedings before the Opposition Division.

VI. The Respondent submitted in writing and orally *inter alia* that

- the wording "abutment surface" used in claim 1 of the patent in suit was unclear since the lower surface of the distributor was not necessarily in contact with the surface of the matrix, i.e. abutting the other surface, but, to the contrary, had to be at least partly separated from the upper surface of the matrix by a gap;
- since the patent in suit did not contain any definition of the wording "abutment surface" this unclear feature had to be either disregarded or interpreted so broadly as possible in the light of the description;
- the entire surface of the distributor facing the matrix disclosed in document (1), including the inner surface of the engraved channels, had to be understood as being an abutting surface as required in the patent in suit;

- since the product disclosed in document (1) included a liquid accommodating gap between the inner surface of the channels engraved on the lower surface of the distributor and the upper surface of the chromatographic matrix, which could be a monolithic and porous polymeric membrane disc, document (1) described a chromatography column having all the features of the subject-matter of claim 1 of the patent in suit;

- the claimed subject-matter thus lacked novelty in the light of the teaching of document (1).

The Respondent noted also that the Opposition Division had not committed any procedural violation.

VII. The Appellant requested in writing that the decision to revoke the patent be cancelled and that the patent be reinstated.

The Board understands therefrom that the Appellant requests that the decision under appeal be set aside and that the patent be maintained as granted.

VIII. The Respondent requests that the appeal be dismissed.

Reasons for the Decision

1. *Interpretation of claim 1*

1.1 Claim 1 of the patent in suit relates to a liquid chromatography column comprising "...a distributor (3,7) located adjacent the inlet means (5) for distributing

the incoming liquid and a liquid accommodating gap between the matrix (2) and the abutment surface of the distributor (3,7) which gap (8) is devoid of matrix material".

The Board notes that the wording of the claim appears at first sight contradictory since it requires that the lower surface of the distributor is abutting the chromatographic matrix, i.e. is in contact at least with some points of the matrix and, on the other hand, contains a reference to gap (8) of figure 1b relating to a continuous gap between the distributor and the matrix, in which case the surface of the distributor would not be abutting the matrix.

Moreover, even though the claim requires that the gap be free of matrix material, this requirement appears to be superfluous since a gap is a free space and cannot contain any other material.

Therefore, the Board finds that the wording of the claim is unclear and has to be interpreted taking into account the description.

- 1.2 The description of the patent in suit specifies that no gap is required in zero liquid flow conditions, in which case the distributor surface is abutting completely, but a gap can arise as a result of the compression of the monolithic matrix by the liquid flow (page 3, lines 6 and 7). Furthermore, the surface of the inline adaptor (i.e. the distributor) proximal to the matrix may conveniently be bevelled from the centre of the adaptor and out towards the periphery thereof (page 3, lines 19 to 20), wherein this surface includes

also the surface of the distribution function or facility (7), e.g. a distribution cone as shown in figure 1a, including the liquid flow outlet holes.

The Board notes that the wording of claim 1 includes also this surface (7) as part of the so-called abutment surface.

Therefore, the Board finds that the so-called abutment surface of claim 1 has to be understood as being the surface of the distributor proximal to the matrix, which surface includes the surface of the distribution facilities insofar as this surface is continuous and the distribution facilities are not separated from the rest of the surface by other means; moreover, a liquid accommodating gap must exist between at least part of said proximal surface of the distributor and the upper surface of the chromatographic matrix.

2. *Novelty*

As found by the department of first instance in its decision (see point III above) and not contested in writing by the Appellant, document (1) describes a liquid chromatography column comprising a column tube including a chromatographic matrix, wherein the matrix can be a polymeric membrane disc and can thus be monolithic and porous (see column 1, lines 3 to 19; column 2, lines 36 to 46; figure 3).

The column described in document (1) comprises a liquid distributor having adjacent liquid flow inlet means and having liquid flow outlet holes in channels engraved onto the lower surface of the distributor for

distributing the incoming liquid onto the matrix (column 1, last line to column 2, line 19; column 2, line 64 to column 3, line 17; figures 1a and 1b).

Therefore, the liquid flowing out of these holes will accommodate necessarily in the empty volume existing between the inner surface of the channels and liquid flow outlet holes and the upper surface of the matrix (column 2, lines 20 to 24).

Since the inner surface of such channels engraved onto the surface of the distributor proximal to the matrix has to be understood as being part of the abutment surface as required in claim 1 of the patent in suit (see point 1.2 above), the Board finds that the chromatography column disclosed in document (1) includes a liquid accommodating gap devoid of matrix material between the abutment surface of the distributor and the matrix.

Therefore, the product of document (1) has all the features of the subject-matter of claim 1.

The Board concludes that the subject-matter of claim 1 lacks novelty.

Since the appeal fails already on these grounds there is no need to discuss the other claims or the other documents submitted by the Respondent against the novelty of the claimed subject-matter, including the alleged prior use of the product commercialised under the name "Quick Disk".

3. *Alleged violation of the right to be heard*

Since the arguments submitted by the Appellant with regard to an alleged procedural violation of the department of first instance concern the assessment of the alleged public prior use of the product "Quick Disk" only and not the assessment of novelty on the basis of the prior art document (1) on the basis of which the appeal has to be dismissed, there is no need to discuss this point further.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

G. Rauh

P. -P. Bracke