

**Internal distribution code:**

- (A)  Publication in OJ  
(B)  To Chairmen and Members  
(C)  To Chairmen  
(D)  No distribution

**Datasheet for the decision  
of 10 January 2012**

**Case Number:** T 0363/11 - 3.3.10  
**Application Number:** 95912469.4  
**Publication Number:** 699902  
**IPC:** G01N 30/48, B01J 20/32,  
C07B 57/00  
**Language of the proceedings:** EN

**Title of invention:**

Filler for high-performance liquid chromatography and method  
of manufacturing the same

**Patentee:**

DAICEL CHEMICAL INDUSTRIES, LTD.

**Opponent:**

Eka Chemicals AB

**Headword:**

HPLC packing material/DAICEL

**Relevant legal provisions:**

EPC Art. 100(c), 123(2), 123(3)

**Keyword:**

"Main request: added subject-matter (yes)"

"Auxiliary request 1: extension of protection conferred (no) -  
more embodiments excluded than in granted claims"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 0363/11 - 3.3.10

**D E C I S I O N**  
**of the Technical Board of Appeal 3.3.10**  
**of 10 January 2012**

**Appellant:** DAICEL CHEMICAL INDUSTRIES, LTD.  
(Patent Proprietor) 1, Teppo-cho  
Sakai-shi, Osaka 590 (JP)

**Representative:** Hammer, Jens & Weidenhiller, Gabriele  
Grünecker, Kinkeldey  
Stockmair & Schwanhäusser  
Anwaltssozietät  
Leopoldstrasse 4  
D-80802 München (DE)

**Respondent:** Eka Chemicals AB  
(Opponent) S-445 80 Bohus (SE)

**Representative:** Van Deursen, Petrus Hubertus  
Akzo Nobel N.V.  
Legal & IP  
P.O. Box 9300  
NL-6800 SB Arnhem (NL)

**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted 16 December 2010  
revoking European patent No. 699902 pursuant to  
Article 101(3)(b) EPC.**

**Composition of the Board:**

**Chairman:** P. Gryczka  
**Members:** J. Mercey  
D. S. Rogers

## Summary of Facts and Submissions

- I. The Appellant (Proprietor of the Patent) lodged an appeal against the decision of the Opposition Division revoking European patent No. 699 902.
- II. Notice of Opposition had been filed by the Respondent (Opponent) requesting revocation of the patent in its entirety on the grounds of *inter alia* extending the subject-matter of the patent in suit beyond the content of the application as filed (Article 100(c) EPC).
- III. The decision under appeal was based on a main request, namely the patent as granted, and on the patent as amended according to the then pending first auxiliary request.

Claim 1 of the patent as granted read as follows:

"A packing material for high-performance liquid chromatography, which comprises a polysaccharide derivative coated on a carrier, wherein 80 to 100% of the hydroxyl groups of the polysaccharide of the polysaccharide derivative are substituted with a substituent, and which is characterized in that the amount of dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100 contained in said polysaccharide derivative is not more than 0.1 mg as determined by passing a mixed solution of n-hexane/2-propanol in a volume ratio of 9/1 through a column having an inner diameter of 1 cm and a length of 25 cm at a flow rate of 4.7 ml/min and at a temperature of 40°C, taking 564 ml of the solution and concentrating the solution to dryness."

Claim 1 of the then pending first auxiliary request differed from claim 1 of the main request in that the feature "the amount of dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100 contained in said polysaccharide derivative" was replaced by "the amount of dissolved matter derived from the polysaccharide derivative".

IV. The Opposition Division held that the subject-matter of claim 1 of the main request extended beyond the content of the application as filed (Article 100(c) EPC), since there was no disclosure in the application as filed of the feature "low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100 contained in said polysaccharide derivative". The subject-matter of the then pending auxiliary requests 1 and 2 met the requirements of Article 123(2) EPC, but led to an extension of the protection conferred by the patent and thus offended against Article 123(3) EPC, since more components than in the granted version, such as polymers having a degree of polymerization of less than 50 and more than 100, were now included in the packing material.

V. With letter dated 18 March 2011, the Appellant submitted auxiliary requests 1 and 2, which were identical to auxiliary requests 1 and 2 on which the contested decision was based. With letter dated 9 December 2011, the Appellant submitted auxiliary requests 3 to 6.

VI. The Appellant argued that the claims of all requests did not extend beyond the content of the application as

filed. More particularly, it argued that the feature "low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100" in claim 1 of the main request was supported by page 9, lines 15 to 18, in combination with page 8, lines 6 to 9 and page 3, lines 7 to 13 and Examples 1 and 2 of the application as filed. These passages supported the fact that the dissolved matter referred to in original claim 1 was exclusively the low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100.

The Appellant argued that the amendment made to claim 1 of auxiliary request 1 did not lead to an extension to the protection conferred, since if the amount of all the dissolved matter must be not more than 0.1 mg, then the amount of low molecular weight polysaccharide derivatives having a degree of polymerization of from 50 to 100 was also clearly not more than 0.1 mg, regardless of whether there were additional low molecular weight components present in the packing material in any amount. As such, more embodiments of a packing material were excluded therefrom than from granted claim 1.

VII. The Respondent argued that the main request contained subject-matter extending beyond the content of the application as filed, contrary to the requirements of Article 100(c) EPC. More particularly, it submitted that it agreed with the opinion of the Board expressed in its communication dated 23 September 2011 that there was no disclosure in the application as filed of a packing material containing dissolved matter, apart from a low molecular weight polysaccharide derivative

having a degree of polymerization of from 50 to 100, in any amount. The Respondent had no objections under Article 123(2) EPC to the claim 1 of auxiliary request 1. The amendments made thereto offended, however, against the requirements of Article 123(3) EPC, since said claim now covered packing materials which must no longer contain dissolved low molecular weight polysaccharide derivatives having a degree of polymerization of from 50 to 100, as was the case in claim 1 as granted, but could instead, for example, contain dissolved low molecular weight polysaccharide derivatives having a degree of polymerization different from 50 to 100. This led to an extension of the protection conferred.

VIII. The Appellant requested that the decision under appeal be set aside and the patent be maintained on the basis of the main request, namely the patent as granted, or, subsidiarily, on the basis of either of auxiliary requests 1 or 2 submitted with letter dated 18 March 2011, or on the basis of any of auxiliary requests 3 to 6 submitted with letter dated 9 December 2011.

The Respondent requested that the appeal be dismissed.

IX. At the end of the oral proceedings held on 10 January 2012 the decision of the Board was announced.

## **Reasons for the Decision**

1. The appeal is admissible.

*Main request*

2. *Article 100(c) EPC*

2.1 In order to determine whether or not an amendment adds subject-matter extending beyond the content of the application as filed, it has to be examined whether technical information has been introduced which a skilled person would not have directly and unambiguously derived from the application as filed, either explicitly or implicitly.

2.2 Claim 1 is directed to a packing material for high-performance liquid chromatography comprising a polysaccharide derivative coated on a carrier, wherein the amount of dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100 contained in said polysaccharide derivative is not more than 0.1 mg as determined by a particular method. Said claim is a combination of original claims 1, 2 and 5, with the amendment that the original feature "dissolved matter" has been replaced by the feature "dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100".

2.3 The only disclosure in the application as filed of the amount of dissolved matter, of any kind, in the polysaccharide derivative being not more than 0.1 mg as determined by the method as defined in granted claim 1, is in original claim 2 (the same wording being found on page 4, lines 16 to 23), wherein it is disclosed that the amount of "dissolved matter" is not more than 0.1 mg, as determined by said method.

2.4 The Board holds that in view of the fact that the term "dissolved matter" as used in original claim 2 is unqualified, apart from that it must be elutable by the method defined therein, it embraces **any** such elutable dissolved matter, said dissolved matter thus **including** any dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100, also elutable by this method, as supported by the description on page 8, lines 6 to 9 and page 9, lines 15 to 18 of the application as filed, **but not being restricted thereto**. Said passages expressly disclose that a "main cause" of the formation of the dissolved matter is a low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100. Thus the application as filed supports a packing material comprising a polysaccharide derivative wherein the amount of **all** dissolved matter derived therefrom is not more than 0.1 mg as determined by a specific method only, whereas claim 1 as granted merely specifies that the amount of low molecular weight polysaccharide derivatives having a degree of polymerization of from 50 to 100 contained in the polysaccharide derivative is not more than 0.1 mg as determined by the same method. Thus in claim 1 as granted, the amount of other dissolved matter is no longer subject to any restriction, such that this claim covers packing materials containing any other amounts of dissolved matter, such packing materials not being supported by the application as filed.

2.5 The Appellant submitted, however, that the "dissolved matter" of original claim 2 should be read as meaning exclusively "dissolved low molecular weight



polysaccharide derivative having a degree of polymerization of from 50 to 100" as supported by page 3, lines 7 to 13, page 8, lines 6 to 9, page 9, lines 15 to 18, in combination with Examples 1 and 2 of the application as filed.

2.5.1 However, as already indicated in point 2.4 above, the passages referred to on pages 8 and 9 of the application as filed expressly state that a "main cause" of the formation of the dissolved matter is a low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100, such that these passages do not support the Appellant's argument that the term "dissolved matter" as used in the application was equivalent to "dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100". Indeed to the contrary, they show that the term "dissolved matter" as used in the application as filed embraces the low molecular weight polysaccharide derivatives having a degree of polymerization of from 50 to 100, but is not restricted thereto.

2.5.2 With regard to the Examples 1 and 2, referred to by the Appellant as support for the dissolved matter consisting of only dissolved low molecular weight polysaccharide derivatives having a degree of polymerization of from 50 to 100, the skilled person derives from these examples nothing more than the bare disclosure of the specific characteristics of these particular packing materials. Therefore, the original disclosure of these two specific examples cannot support the generalisation indicated in claim 1, namely

a packing material comprising a broad range of polysaccharide derivatives on any carrier.

2.5.3 With regard to the passage at page 3, lines 7 to 13 cited by the Appellant, this passage forms part of the description of the prior art, said description beginning at page 2, line 5 and continuing until page 3, line 18 of the application as filed. That particular known packing materials for high performance liquid chromatography comprising a polysaccharide derivative coated on a carrier contain dissolved low molecular weight polysaccharides and that the aim of the present invention (see page 3, lines 19 to 24 of the application as filed) was to provide packing materials with a greatly reduced amount of the dissolved matter is no support for the term "dissolved matter" being equivalent to "dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100", but again merely suggests that undesired dissolved matter in packing materials may comprise low molecular weight polysaccharides.

2.6 Thus, the passages at page 3, lines 7 to 13, page 8, lines 6 to 9, page 9, lines 15 to 18 and Examples 1 and 2 of the application as filed cannot support the Appellant's argument that "dissolved matter" was equivalent to "dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100".

2.7 The Board thus concludes that there is neither an explicit nor an implicit disclosure in the application as filed for the replacement in claim 1 of the term

"dissolved matter" with "dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100".

- 2.8 Claim 1 of the main request therefore extends the subject-matter claimed beyond the content of the application as filed, thus justifying the ground for opposition pursuant to Article 100(c) EPC.

*Auxiliary request 1*

3. Article 123(2) EPC

Claim 1 is a combination of original claims 1, 2 and 5. The Board thus concludes that the subject-matter of claim 1 of this request does not extend beyond the content of the application as filed, such that the requirements of Article 123(2) EPC are satisfied. This was not contested by the Respondent.

4. *Article 123(3) EPC*

- 4.1 Article 123(3) EPC provides that the claims of a patent as granted may not be amended during opposition/appeal proceedings in such a way as to extend the protection conferred. In order to decide whether or not an amendment of the patent in suit satisfies this requirement, it is necessary to compare the protection conferred by the claims as granted, with that of the claims after amendment.

- 4.2 Claim 1 is directed to a packing material for high-performance liquid chromatography, which comprises a polysaccharide derivative coated on a carrier, and

which is characterized in that the amount of **dissolved matter** derived from the polysaccharide derivative is not more than 0.1 mg as determined by a specific method (emphasis added).

Claim 1 of the patent as granted is directed to a packing material for high-performance liquid chromatography, which comprises a polysaccharide derivative coated on a carrier, and which is characterized in that the amount of **dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100** contained in said polysaccharide derivative is not more than 0.1 mg as determined by the same method as in auxiliary request 1 (emphasis added).

4.3 Thus the question to be answered is whether claim 1 of auxiliary request 1 covers any packing materials which were not covered by claim 1 as granted. It thus needs to be examined whether the replacement of the term "dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100 is not more than 0.1 mg" by the term "dissolved matter is not more than 0.1 mg" results in an extension of the protection conferred.

4.4 When considering this question, it must be borne in mind that the feature concerned is a **negative** feature, in the sense that it defines embodiments which are **excluded** from the claim.

4.5 The term "dissolved matter" as used in the patent in suit completely embraces dissolved low molecular weight polysaccharide derivatives having a degree of

polymerization of from 50 to 100 (see point 2.5.1 above). Thus those embodiments wherein the amount of dissolved low molecular weight polysaccharide derivatives having a degree of polymerization of from 50 to 100 is not more than 0.1 mg are automatically excluded from the scope of claim 1 if the amount of **all** dissolved matter may not be more than 0.1 mg, the method for determining the amount being the same in each case. Consequently, more embodiments of a packing material are excluded from claim 1 of auxiliary request 1 than from claim 1 as granted. Its scope is thereby reduced *vis-à-vis* granted claim 1.

- 4.6 The Respondent argued that the feature "the amount of dissolved low molecular weight polysaccharide derivative having a degree of polymerization of from 50 to 100 contained in said polysaccharide derivative is not more than 0.1 mg" in granted claim 1 should not be read as a negative feature, but rather as a positive feature, namely that the polysaccharide derivative coated on the carrier must contain  $>0$  and  $\leq 1$  mg of dissolved low molecular weight polysaccharide derivatives having a degree of polymerization of from 50 to 100, whereas in claim 1 of auxiliary request 1, the polysaccharide was no longer required to contain this particular low molecular weight matter.

The Board, however, holds that when a material (M) is defined as containing not more than a certain amount of a certain compound (A), then this does not mean that it must contain a finite quantity of compound (A), but merely that the amount of (A) may not exceed a certain limit. This situation is to be distinguished from a claim positively formulated as comprising M and A,

wherein the amount of A may not exceed a certain limit. Thus, since claim 1 as granted does not have to contain any dissolved low molecular weight polysaccharide derivatives having a degree of polymerization of from 50 to 100, the Respondent's argument must be rejected.

4.7 Thus, the Board concludes that the scope of protection conferred by claim 1 and dependent claims 2 to 5, and of claims 6 to 8, which relate to a process for producing the packing material of claims 1 to 5, has not been broadened *vis-à-vis* that of the claims as granted, such that the requirements of Article 123(3) EPC are satisfied.

5. *Remittal*

The Opposition Division decided solely on the issue of Articles 100(c), 123(2) and 123(3) EPC. As the Opposition Division has not yet ruled on the other grounds of opposition, the Board considers it appropriate to exercise the power conferred on it by Article 111(1) EPC to remit the case to the Opposition Division for further prosecution on the basis of the claims according to auxiliary request 1.

**Order**

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

1. The decision under appeal is set aside.
  
2. The case is remitted to the department of first instance for further prosecution upon the basis of auxiliary request 1 as filed with letter dated 18 March 2011.

The Registrar:

The Chairman:

C. Rodríguez Rodríguez

P. Gryczka