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D E C I S I O N
of 16 November 2005

Case Number: T 0827/04 - 3.3.08

Application Number: 95934682.6

Publication Number: 0787296

IPC: G01N

Language of the proceedings: EN

Title of invention:

Separation Device For Microparticles Involving A Magnetic Rod

Patentee:

Thermo Electron Oy

Opponent:

Bio-Nobile Oy

Headword:

Magnetic rod/THERMOELECTRON

Relevant legal provisions:

EPC Art. 84, 54, 56

Keyword:

"Main request - added subject-matter (no) "
"Extension of protection (no) "
"Clarity (yes) "
"Novelty and inventive step (yes) "

Decisions cited:

G 0009/91

Catchword:

-



Case Number: T 0827/04 - 3.3.08

D E C I S I O N
of the Technical Board of Appeal 3.3.08
of 16 November 2005

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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
3 May 2004 concerning maintenance of European
patent No. 0787296 in amended form.

Composition of the Board:

Chairman: L. Galligani
Members: P. Julià
C. Heath

Summary of Facts and Submissions

I. European patent No. 0 787 296 with the title "Separation device for microparticles involving a magnetic rod" was granted with six claims on the basis of European patent application No. 95 934 682.6, which originated from an International application published as WO 96/12958, to be referred to in the present decision as the application as filed.

Claim 1 as granted reads as follows:

"1. A means for separating magnetic particles from a composition, characterized in comprising:

- an elongated protective cover (1;1') with an upper end and a lower end,
- the protective cover comprising a recess (2) extending from the upper end towards the lower end thereof,
- the recess comprising a movable rod magnet (4;4') extending in the longitudinal direction of the recess, the proportion of the length of the rod magnet to its thickness being at least about 2:1, preferably at least about 3:1."

Claims 2 to 4 were further embodiments of claim 1. Claim 5 related to a method for separating magnetic particles from a composition containing them, characterised in that the separation means of claim 1 was pushed into the composition. Claim 6 was a further embodiment of claim 5.

II. On 7 December 2001 an opposition was filed on the grounds of Article 100(a) EPC alleging lack of novelty (Article 54 EPC) and lack of inventive step (Article 56 EPC). On 3 May 2004 the opposition division issued an interlocutory decision (Articles 102(3) and 106(3) EPC), whereby the patent was maintained on the basis of a main request filed with patentee's letter of 23 October 2003.

Claim 1 of the **main request** reads as follows:

"1. Use of a means for separating magnetic microparticles from a composition, the size of which particles is 0.05 - 10 μm and which particles are used to bind biomaterial, characterised in that the means comprises:

- an elongated protective cover (1;1') with an upper end and a lower end with a tip,
- the protective cover comprising a recess (2) extending from the upper end towards the lower end thereof,
- for accumulating the particles on the tip of the cover, the recess comprising a movable rod magnet (4;4') extending in the longitudinal direction of the recess, the proportion of the length of the rod magnet to its thickness being at least about 2:1, preferably at least about 3:1."

Claims 2 to 4 were further embodiments of claim 1. Claims 5 and 6 related to a method for separating magnetic microparticles from a composition, whereby the method referred to all the features defined in claim 1.

III. A notice of appeal was filed on 2 July 2004 by the opponent (appellant) against the interlocutory decision of the opposition division and the statement of grounds of appeal was filed on 13 September 2004. With this statement of grounds of appeal, the appellant proposed a possible set of claims considered to fulfil the requirements of the EPC.

IV. In reply to the statement of grounds of appeal, the patentee (respondent) filed observations with letter dated 17 December 2004.

V. On 21 July 2005, the board sent a communication to the parties pursuant to Article 11(1) of the Rules of Procedure of the Boards of Appeal in which the board's preliminary, non-binding opinion was set out.

VI. In reply to the board's communication, both appellant and respondent filed further observations with letters of 16 and 14 October 2005, respectively. The respondent filed an auxiliary request.

VII. Oral proceedings took place on 16 November 2005. At the beginning of the oral proceedings, the respondent withdrew the auxiliary request on file and filed a new one.

VIII. The following documents are mentioned in the present decision:

D2: US 2,970,002 (publication date: 31 January 1961);

D3: WO-A-86/06493 (publication date: 6 November 1986);

D4: WO-A-87/05536 (publication date: 24 September 1987);

D6: Catalogue of IBS Magnet, K-H Schroeter, Berlin, DE
(no date of publication given).

IX. The appellant's arguments in writing and during oral proceedings, insofar as they are relevant to the present decision, may be summarised as follows:

Claims as maintained by the opposition division

Article 84 EPC (Clarity of the claims)

The term "tip" introduced into claim 1 was vague and had a broad meaning. It did not characterize the actual properties (shape) of the tip that were required for carrying out the invention successfully. The description of the opposed patent referred to the lower end of the cover as provided with a tapering, sharp-edged tip with a concave surface. The length of the tip was defined as corresponding approximately to the width of the lower end of the cover. None of these features, however, was found in the claims.

Moreover, the proportion of the length of the rod magnet to its thickness or the length of the rod magnet alone were not essential features required for solving the technical problem identified in the patent. The essential feature underlying the invention was that the rod magnet had to be long enough so that its upper pole stayed always above the surface of the composition. According to the description, when the rod magnet was placed in a vertical position, the magnetic particles (used to bind biomaterial) were to be collected at the lower end of the elongated rod magnet. However, if the

whole elongated rod magnet (upper and lower ends) was under the surface of the composition, the magnetic particles were undesirably gathered to both ends of the rod magnet. For this reason, the means referred to in claims 1 and 5 did not solve the problem identified in the patent and they were not supported thereby. The terminology of the claims was inappropriate and resulted in a lack of clarity.

Article 54 (Novelty)

The properties referred to in the preamble of claim 1, namely the size of the magnetic microparticles and the use of these microparticles to bind biomaterial, were well-known in the prior art. Although they were not explicitly mentioned in document D4, they could nevertheless be read therein by the skilled person with common general knowledge in the field. Evidence was on file demonstrating that the inventor of document D4 was well aware of such a knowledge. The device disclosed in this document could be used for the claimed purposes and it had features that were similar to the ones characterizing the means referred to in claims 1 and 5. Although the length of the rod magnet was not disclosed in document D4, there were no limitations as to the properties of the magnet to be used. Thus, since elongated rod magnets - with a proportion of length to thickness falling under the range indicated in the claims (particularly, at the lower end 2:1) - were commercially available in the prior art (as shown *inter alia* by document D2), the use of those elongated rod magnets was not excluded from the teachings of document D4.

The disclosure of document D3, which was similar to document D4, was clearly concerned with microparticles that were used to bind biomaterial. These microparticles should have the same size as the size range indicated in the claims. There were no limitations imposed on the magnet used in this document and thus, commercially available elongated rod magnets were not excluded from the teachings of document D3. Both documents D3 and D4 anticipated the claimed subject-matter.

Inventive step (Article 56 EPC)

Two different arguments were presented in support of the lack of inventive step. Whereas the first line of argumentation relied upon documents D4 or D3 as closest prior art, the closest prior art was represented by document D2 in the second line of argumentation.

Document D4 disclosed an apparatus that could be used in the methods of the present request. Neither the size of the microparticles referred to in the claims nor their use for binding biomaterial required any inventive contribution from the skilled person. They were obvious choices for the skilled person as shown by the prior art on file, *inter alia* document D3, and thus, both size and use could be easily derived therefrom. Starting from any one of documents D4 or D3 as the closest prior art, the only technical feature which distinguished the devices disclosed in these documents from the means referred to in the claims was the proportion of the length of the rod magnet to its thickness (at least about 2:1, preferably at least about 3:1). However, since there were no limitations as

regards the rod magnets used in documents D4 or D3 and elongated rod magnets with these proportions were commercially available (as shown *inter alia* by document D2), the selection of those rod magnets was not inventive. This was even more so since neither the proportions nor the length of the rod magnet alone were essential features contributing to the solution of the technical problem identified in the opposed patent. In the absence of the essential feature in the claims, namely that the rod magnet had to be long enough so that its upper pole stayed always above the surface of the composition, all other features represented only arbitrary choices devoid of any inventive merit.

Document D2 disclosed the use of an elongated rod magnet for collecting ferromagnetic particles, wherein the proportion of the length of the rod magnet to its thickness was greater than 2:1. This was clearly shown in Figure 2 of this document (length to thickness about 10:1) and the reference in the description to alnico (AlNiCo) magnets, which were known to have a proportion of length to thickness of about 4:1 as shown by document D6. Starting from document D2 as the closest prior art, the only technical feature which distinguished the claimed subject-matter from the disclosure of this document was the fact that in document D2 the collected particles were not microparticles with biomaterial bound thereto. However, this feature was technically irrelevant when defining the device itself, as it did not affect the behaviour of the ferromagnetic particles in the resulting magnetic field. Moreover, the use of these (or similar) devices for collecting biological material was well-known in the prior art as shown *inter alia* by

document D3. Document D3 demonstrated that the use of magnets for concentrating and collecting ferromagnetic microparticles with biomaterial bound thereto was normal practice for the skilled person in the field of biotechnology. Thus, the teachings of document D2 in combination with document D3 deprived the claimed subject-matter of inventive step. Reference was also made to the fact that neither the proportions nor the length of the elongated rod magnet alone contributed to the solution of the technical problem identified in the patent.

- X. The respondent's arguments in writing and during oral proceedings, insofar as they are relevant to the present decision, may be summarised as follows:

Claims as maintained by the opposition division

Article 84 EPC (Clarity of the claims)

The features introduced into claims 1 and 5 (in particular, the feature "for accumulating the particles on the tip of the cover") had a formal support in the description of the application as filed. They were added mainly to emphasize the technical differences and the contribution of the opposed patent over the prior art, in particular over document D2 which disclosed the use of a relatively long magnet with a low coercivity.

According to the established case law, objections as to whether the claims defined the matter for which protection was sought and whether the claims were clear and supported by the description (Article 84 EPC) could only be raised against the amendments introduced into the granted claims. The objections raised by the

appellant were against definitions that were already found in the claims as granted. Moreover, these objections concerned the question of whether the invention was sufficiently disclosed (Article 83 EPC). However, Article 83 EPC was not an original ground of opposition and, accordingly, these objections were irrelevant and they were not to be considered by the board.

Article 54 EPC (Novelty)

None of the cited documents of the prior art, namely documents D2 and D4, disclosed all the features defined in independent claims 1 and 5. Thus, the requirements of Article 54 EPC were fulfilled.

Article 56 EPC (Inventive step)

The opposed patent differed from the closest prior art represented by document D4 in the use of an exceptionally long magnet. This elongated rod magnet made possible to release magnetic microparticles (used to bind biomaterial) into very small vessels as shown in Figure 3 of the patent. The technical problem solved by the opposed patent was thus the provision of a method to effectively separate and collect magnetic microparticles so that they could then be conveniently transferred and released into smaller volumes. The patent solved this problem by using an elongated rod magnet that concentrated the microparticles at the tip of the lower pole of the rod magnet. The microparticles were collected so that only the lower pole of the magnet affected these microparticles. This problem was

not identified in document D4 nor was its solution made obvious by this document.

Although it was advantageous to keep the upper pole of the elongated rod magnet above the surface of the composition so that the adhesion of the microparticles to the upper pole was prevented, this was not the sole possible mode of carrying out the invention. The microparticles could also be collected at the tip of the lower pole of the elongated rod magnet by lowering the magnet into the composition gradually from above or else by concentrating first the microparticles at the bottom of the vessel as referred to in the description of the patent. The sentence "for accumulating the particles on the tip of the cover" was introduced into the claims so as to take into account these embodiments.

Document D6 showed that high energy magnets with high coercivity (the first choice for a skilled person) were commercially available only as short magnets.

Document D2, which related to an (old) technical field different from the patent, disclosed the use of an elongated magnet. However, this magnet was of alnico (AlNiCo) material which was very unstable and had a low coercivity. Thus, it was unsuitable for use in open magnetic circuit operations such as the ones required by the opposed patent.

- XI. The appellant (opponent) requested that the decision under appeal be set aside and that the patent be maintained on the basis of the auxiliary request filed by the patentee in the oral proceedings or alternatively on the basis of the auxiliary request proposed by the appellant on 13 September 2004.

XII. The respondent (patentee) requested that the appeal be dismissed, or that the decision under appeal be set aside and the patent be maintained on the basis of the auxiliary request filed in the oral proceedings.

Reasons for the Decision

Claims as maintained by the opposition division
Rule 57a EPC and Articles 84 and 123(2), (3) EPC

1. According to Rule 57a EPC, the description, claims and drawings may be amended provided that the amendments are occasioned by grounds for opposition specified in Article 100 EPC. These amendments are to be examined for compliance with the requirements of the EPC, in particular with Articles 123(2), (3) EPC and 84 EPC. Since a lack of clarity is not a ground for opposition, objections based upon Article 84 EPC may be examined only if they arise out of the amendments made in the opposition proceedings (cf. G 9/91, OJ EPO 1993, 408, point 19 of the Reasons and "Case Law of the Boards of Appeal of the EPO", 4th edition 2001, VII.C.10.1.2 and VII.C.10.2, pages 484 and 488, respectively).
2. The amendments introduced into the granted claims before the opposition division were intended to differentiate the claimed subject-matter from the disclosures of the prior art, in particular from the teachings of documents D2, D3 and D4. Thus, they are occasioned by grounds of opposition and the requirements of Rule 57a EPC are fulfilled.

3. These amendments have a formal basis in the description of the application as filed. References to magnetic microparticles (used as a solid phase in various applications to bind biomaterial) and to the size of these microparticles are found on page 1, lines 11 to 15 and page 3, line 38 of the application as filed. Although these references are in the context of the technical background of the invention, they apply to the invention itself as well, which is intended to be used "*especially in the fields of biotechnology, biochemistry and biomedicine*" (cf. page 1, lines 5 to 7). References to a "tip" where the microparticles are to be accumulated and methods therefor (i.e. for accumulating the particles on the tip) are found *inter alia* on page 2, line 29 to page 3, line 12. These amendments constitute limitations of the corresponding granted claims, i.e. they do not extend the scope of the protection conferred by the granted claims. Thus, the requirements of Articles 123(2), (3) EPC are fulfilled.

4. The opposed patent refers to a tip "*with a sharp downward projection ... shaped like a cone with a concave surface*" only as a preferred embodiment (cf. paragraphs [0013] and [0023]) and thus, it does not exclude the possible use of other tips with different shapes and/or properties. In the light of the prior art on file and the skilled person's common general knowledge, the board considers that the term "tip" is normally used in the field and that it is neither unclear nor renders the claimed subject-matter ambiguous.

5. The appellant's objection based on the absence of an essential technical feature in the claims, namely that the magnet had to be long enough so that the upper pole of the magnet always stays above the surface of the composition, is an objection raised under Article 84 EPC in combination with Article 83 EPC. However, this objection does not arise out of the amendments made in the claims as granted (in which this feature was already missing). Moreover, Article 83 EPC (Article 100(b) EPC) was not an original ground of opposition. A fresh ground of opposition cannot be introduced into the appeal proceedings unless the patentee agrees thereto (cf. G 9/91, *supra*, point 18 of the Reasons), which is not the case here. Therefore, the board is not empowered to examine the objection (although this might have to be considered in the assessment of Article 56 EPC, see point 19 *infra*).
6. Thus, the requirements of Article 84 EPC are considered to be fulfilled.

Article 54 EPC (Novelty)

7. According to the established case law of the Boards of Appeal, a disclosure is novelty destroying only if all the features of the claimed subject-matter are directly and unambiguously derivable from a prior art document. In the assessment of novelty, assumptions, hypothetical possibilities or speculations cannot be taken into consideration (cf. "Case Law", *supra*, I.C.2, page 54).
8. Documents D4 and D3 have been cited against the novelty of the claimed subject-matter. However, none of these

documents discloses all the features recited in independent claims 1 and 5.

There is no reference in document D4 to microparticles of the indicated size nor to their use for binding biomaterial. Moreover, and contrary to the claims of the present request which require the rod magnet to have a very specific length-to-thickness ratio ("*the length of the rod magnet to its thickness being at least about 2:1, ...*"), no such requirement is directly derivable from the teachings of document D4. Nor can it be implicitly derived from this document, since the shank (11) shown in Figure 1 is not defined as being of a ferromagnetic material.

Document D3 discloses a device with a rod magnet used for separating microparticles with biomaterial bound thereto. However, there is no reference to the length-to-thickness ratio of this rod magnet. Nor it is specified whether the inner rod (10) shown in Figure 4 is of a ferromagnetic material. Thus, this ratio can neither explicitly nor implicitly be derived from document D3.

The use of elongated rod magnets having the specific length-to-thickness (L/D) ratio as taught in the opposed patent is not derivable from documents D4 or D3 which disclose devices that, as illustrated in the drawings, use only conventional short magnets.

9. Although the L/D ratio is not explicitly disclosed in document D2, it is nevertheless implicitly given by the reference to the type of rod magnet used, namely AlNiCo magnets. These alnico magnets are known to have a low

coercivity and that, in order to be stable, they must be long ($L/D > 4$) (cf. page 6 of document D6 - N.B.: although no date of publication was given for this document, it was undisputed that it was part of the prior art before the relevant filing date -). However, the magnetic-pickup device disclosed in document D2 is "*intended to be used in picking up metallic filings or other finely divided or comminuted metallic materials from inaccessible places such as acid vats*" (cf. column 1, first paragraph), i.e. in the metal industry. There is no reference in document D2 to a possible use of the disclosed device for separating magnetic microparticles of the specific size indicated in the claims nor to the binding of biomaterial to these microparticles.

10. Thus, the claimed subject-matter is considered to fulfil the requirements of Article 54 EPC.

Article 56 EPC (Inventive step)

11. It is established case law of the Boards of Appeal that for assessing the inventive step the "problem-solution approach" is to be followed with the identification of the closest prior art, the definition of the technical problem to be solved and the assessment of whether the skilled person, having regard to the state of the art, would have suggested the technical features present in the claims for obtaining the results achieved by the invention, i.e. for solving the technical problem (cf. "Case Law", *supra*, I.D.2, page 101).
12. Document D4, identified by both parties as the closest prior art, discloses an apparatus with a permanent

magnet used for collecting ferromagnetic particles in a medium and dispersing them in another medium. Figure 1 illustrates this apparatus, which has a plastic sleeve (5) with a closed nose-shaped end (6) (i.e. an elongated protective cover with an upper end and a lower end with a tip) and wherein the sleeve has a passageway (7) extending from the upper end towards the lower end of said plastic sleeve (i.e. the protective cover comprises a recess extending from the upper end towards the lower end thereof). The passageway (7) accommodates a permanent magnet (10) for reciprocal movement within the passageway (7) in the longitudinal direction of the recess (i.e. the recess comprises a movable magnet extending in the longitudinal direction of the recess) (cf. page 2, lines 25 to page 3, lines 9 and Figure 1/1 of document D4). The apparatus collects and concentrates the particles (3) around the thin-walled, nose-shaped end of the plastic sleeve which is permeable in respect of magnetism but free of remanence (cf. page 2, lines 12 to 21). Thus, the apparatus disclosed in document D4 differs from the means referred to in the claimed subject-matter in that there is no indication of: (i) the length-to-thickness (L/D) ratio of the rod magnet used, (ii) the specific size of the ferromagnetic particles, and (iii) as to whether or not these particles are used to bind biomaterial.

13. Starting from document D4 as the closest prior art, the technical problem to be solved is considered to be the provision of an alternative apparatus for concentrating ferromagnetic particles and uses thereof. This problem is solved by the means disclosed in the patent which comprise a rod magnet of a length-to-thickness ratio of

at least about 2:1. These means are used in the separation of microparticles of the size indicated in the claims, which are themselves used to bind biomaterial.

14. Document D4 refers to the disclosed apparatus as "a *basic one*" and that "*it may be made more sophisticated in a manner obvious to those skilled in the art*". It goes on to describe possible modifications of this apparatus (cf. page 3, line 33 to page 4, line 15). None of these modifications, however, alters the nose-shaped end of the plastic sleeve, the thin-walled plastic material permeable to the magnetic field at this nose-shaped end or the less permeable plastic material - via a thicker body wall (9) - of the rest of the plastic sleeve (5). These features are disclosed as being essential for an optimal concentration of the ferromagnetic particles around the nose-shaped end, since they allow, as illustrated in Figure 1, to place the permanent magnet (10) within the nose-shaped end and to concentrate the magnetic field around this end (cf. page 2, lines 12 to 21 and page 3, lines 10 to 15). There is no suggestion, let alone a possible motivation, to use an elongated rod magnet extending in the longitudinal direction of the passageway towards the less permeable material of the plastic sleeve. Such longitudinal extension would only diminish the intensity of the magnetic field at the thin-walled, nose-shaped end and, if at all, spread the collected particles across the less permeable plastic material instead of concentrating them at the nose-shaped end. Thus, the solution proposed by the patent in suit is not obvious having regard to document D4 alone. Nor is it evident, in the light of these shortcomings, to

- substitute the permanent magnet shown in document D4 for an elongated rod magnet as the one disclosed in document D2, this being a combination of documents relied on by the appellant (cf. point IX *supra*).
15. In fact, there is no indication in document D4 that could have led the skilled person to consider the disclosure of document D2 which belongs to a completely unrelated technical field (metal industry). Moreover, although document D2 discloses a magnetic-pickup device with an elongated rod magnet (22) of a range ($L/D > 4$) falling within the proportion indicated in the claims, a particular "*cap-and-shield unit*" (27, 28) is required so as to "*prevent the metallic filings from moving up along the tube with the magnet*" (cf. column 2, lines 64 to 70 and column 3, lines 21 to 23), i.e. so as to concentrate the filings at the lower end of the device (cf. Figure 2). Thus, document D2 only identifies the very same shortcomings in the use of an elongated rod magnet as the ones derived from the closest prior art document D4 and consequently, it cannot provide any motivation to the skilled person for using such elongated rod magnets.
16. In the light of these considerations, there is no need to further examine whether the references in document D4 to the presence of "*a reactant/reaction product/absorbent/adsorbent or the like*" adhered to the magnetic particles (cf. page 1, lines 9 to 14 and page 3, lines 27 to 32), would have made it implicitly obvious to use the apparatus of document D4 for separating magnetic microparticles of the size range indicated in the claims as well as the use of these microparticles for binding biomaterials.

17. Although not explicitly mentioned, these latter features are derivable from document D3. This document discloses an apparatus with a magnet (11) placed at the end of a rod, which is used for separating magnetic particles (with antibodies or antigens on their surface) from a reaction solution (cf. *inter alia* page 1, lines 30 to 35, Figures 1 and 2). The bottom end of the rod magnet is conical and comprises cup-shaped protective covers (12, 13) onto which the particles become positioned and adhered (cf. page 2, lines 8 to 15, page 3, lines 26 to 35 and Figure 4). Although with a different shaped-tip at the bottom end of the rod magnet, the construction and arrangements of the apparatus disclosed in document D3 are similar to the ones characterizing the apparatus of document D4. Both apparatuses, as illustrated by the figures of these documents, comprise only conventional short magnets and share the same disadvantages when contemplating the use of elongated rod magnets as well (spreading of microparticles across a larger surface and consequently, worse concentration of the sample). Thus, starting from document D3 as the closest prior art, the same problems as for document D4 are to be solved and an analogous reasoning leads the skilled person to the same conclusions in respect of inventive step (cf. points 14 and 15 *supra*).
18. As for the appellant's second line of argumentation (which relies on document D2 as the closest prior art) (cf. point IX *supra*), it has already been noted (see point 15 *supra*) that document D2 relates to an entirely different technical field, i.e. the metal industry, where different problems arise. There is no hint in

that document that could have led the skilled person to replace the "*metallic filings or other finely divided or comminuted metallic materials*" present in "*inaccessible places such as acid vats*" (cf. column 1, first paragraph) for microparticles of 0.05-10 μm with biomaterial bound thereto. In addition, the particular shape (L/D) of the alnico magnet disclosed in document D2 arises from the specific properties of this material when compared to more modern materials (cf. page 6, bottom of left-hand column of document D6). These disadvantageous properties would certainly not have encouraged the skilled person to use this material in devices intended for a very different and recent technical field, such as in the clinical and diagnostic analysis referred to in document D3. Even less so in the light of the particular problems that would have been easily envisioned by the skilled person when using such elongated rod magnets (cf. points 14 and 15 *supra*).

19. It has also been argued that an essential feature is missing from the claims, namely that the rod magnet has to be long enough so that its upper pole always stays above the surface of the composition, and that in the absence of this feature the claimed subject-matter is devoid of any inventive merit (cf. point IX *supra*). It is noted, however, that in the opposed patent this feature is only given as a preferred embodiment, not as an essential one (cf. paragraph [0010]). In fact, other possible methods for carrying out the claimed methods are explicitly disclosed in the patent, such as "... *the particles from the upper part of the column are first collected on the tip so that the upper end of the dipole is constantly above the particles...*" (not the surface) (cf. paragraph [0010]), the use of a

ferromagnetic arm that "... *dissolves the gradient of the upper pole of the field, whereby the upper pole does not carry out the collection of particles*" (cf. paragraph [0014]) and "... *the particles ... are first concentrated into one spot in the vessel ...*" (cf. paragraph [0026]). Essential thus is the accumulation of the microparticles at the tip of the bottom end of the elongated rod magnet independently of the specific mode of operation. There is no doubt that this essential feature is explicitly present as a functional feature in both independent claims 1 and 5 ("*for accumulating the particles on the tip of the cover*") and thus, appellant's argument fails.

20. It follows from the foregoing that the claimed subject-matter of the claims as maintained by the opposition division fulfils the requirements of Article 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed

The Registrar:

The Chairman:

A. Wolinski

L. Galligani