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Datasheet for the decision of 7 September 2010

Case Number: T 1935/07 - 3.4.02

Application Number: 96937919.7

Publication Number: 0923722

IPC: G01N 27/403

Language of the proceedings: EN

Title of invention:
Electrochemical cell

Patentee:
LifeScan, Inc.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 123(2)

Relevant legal provisions (EPC 1973):
-

Keyword:
"No extension beyond the content of the application as filed"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1935/07 - 3.4.02

D E C I S I O N
of the Technical Board of Appeal 3.4.02
of 7 September 2010

Appellant: LifeScan, Inc.
1000 Gibraltar Drive
Milpitas, CA 95035-6312 (US)

Representative: Smaggasgale, Gillian Helen
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 6 July 2007 refusing European application No. 96937919.7 pursuant to Article 97(1) EPC 1973.**

Composition of the Board:

Chairman: A. G. Klein
Members: M. Stock
B. Müller

Summary of Facts and Submissions

I. The applicant and appellant has appealed against the decision of the examining division refusing European patent application number 96937919.7 (published as WO97/18464). Reference was made to the following documents:

X1: US 5437999

X2: Daruhazi et al.: "Cyclic Voltammetry for reversible Redox-Electrode"

X3: EP 351 891

X4: JP 61 002060

X5: JP 60 250246

Y6: EP 359831

IntY2: AU 5487394

DE7: W0 9700441

L7: Cassidy et al.: "Novel Electrochemical Device for the Detection of ... Glucose"

L8: JP 60 244853

L9: Salbeck: "Spectroelectrochemical Thin-Layer Cell for Nonaqueous Solvent"

The examining division reasoned in particular that the feature "said aperture defining a working electrode in the cell" in claims 1 and 23 was not clear under Article 84 EPC 1973, and therefore could not establish novelty as required by Articles 52(1) and 54 EPC 1973. This feature was also not disclosed in the application documents as originally filed contrary to the requirements of Article 123(2) EPC 1973. Moreover, the subject-matter of claims 1 and 23 did not involve an inventive step according to Articles 52(1) and 56 EPC 1973.

II. In its statement of grounds of appeal the appellant requested grant of a patent on the basis of a main request being the request underlying the impugned decision or on the basis of first to sixth auxiliary requests. Oral proceedings were requested if the Board was minded not to grant any of these requests. Following a telephone conversation with the Board the appellant filed on 15 June 2010 as a Main Request, to replace all previous requests, an amended claim set and amended description pages based on subject-matter acknowledged as being novel and inventive by the examining division in its decision. Further amendments on pages 4 and 9 were communicated to the appellant by the Board on 30 June 2010, who confirmed its agreement on 4 August 2010.

The independent claims according to this request read as follows:

1. A method of manufacture of a thin layer electrochemical cell (as herein defined) comprising the steps of:
forming an aperture extending through a sheet of electrically resistive material, said
aperture defining a side wall of the cell and said aperture defining a working electrode area in the cell, mounting a first thin electrode layer to one side of the sheet and extending over the aperture whereby to define a cell first end wall, mounting a second thin electrode layer to the other side of the sheet and extending over the aperture whereby to define a second cell end wall in substantial overlying registration with the first electrode, and providing means for

admission of a liquid into the cell defined between the side wall and said end walls:
wherein each of the metal electrode layers substantially covers the aperture and the sheet of electrically resistive material comprises a laminate having two layers, each of electrically resistive and chemically resistant material, having a metal layer therebetween which in the final product is useful as a reference electrode disposed intermediate the first metal and the second metal.

22. An electrochemical cell comprising an electrically resistive substrate having a first thin layer of first metal on the other face, a second electrically resistive substrate having a second thin layer of metal sputter coated on the other face, said substrates being disposed with the metal coating of one facing the metal coating of the other and being separated by a sheet pierced by an aperture, the wall of which aperture cooperates with said metal coatings to expose a cell wall and wherein said aperture defines a working electrode area in the cell and a sample introduction aperture whereby a solution may be introduced into the cell
wherein the sheet pierced by an aperture comprises a laminate having two layers, each of electrically resistive and chemically resistant material, having a metal layer therebetween which is useful as a reference electrode disposed intermediate the first thin layer of first metal and the second thin layer of metal.

Reasons for the Decision

1. Clarity and original disclosure

1.1 The subject-matter of claim 1 combines the features indicated in claims 1, 4 and 21 as originally filed. The further independent claim 22 is a combination of the features indicated in original claims 21 and 22. Although original claims 21 and 22 are related to a method and device, respectively, it was evident to the skilled person that the cell defined in original claim 22 could be made of laminates as defined in original claim 21.

1.2 The examining division objected to the feature "said aperture defining a working electrode area in the cell" that it covered an embodiment in which only one electrode was defined by the aperture whereas the other electrode was not defined by the aperture. Such an embodiment was not disclosed in the original application and thus infringed Article 123(2) EPC 1973. There was also lack of clarity under Article 84 EPC 1973 in view of the passage at page 10, line 17 to page 11, line 2 of the original documents, referring to electrodes not entirely covering the cell end openings.

1.3 However, the Board is of the opinion that the other features in claim 1, related to first and second electrode layers extending over the aperture, make it clear that "said aperture defining a working electrode area" is a general function of the aperture together with its other general function recited in claim 1 "said aperture defining a side wall of the cell". It is to be noted in this context, that the description as

amended does not contain anymore the passage at page 10, line 17 to page 11, line 2 of the original documents, referring to electrodes not entirely covering the cell end openings.

1.4 Therefore the Board is satisfied that the amendments brought to the independent claims 1 and 22 do not infringe Article 123(2) EPC. This holds also for the dependent claims which correspond to original dependent claims and are related to embodiments of the invention defined in the independent claims. Moreover the Board is of the opinion that the claims are sufficiently clear under Article 84 EPC 1973.

2. Novelty and inventive step

The Board has no reason to question the finding of the examining division in its decision under point 6.1 of section II "reasoning" that subject-matter based on original claim 21 is new and involves an inventive step.

3. The description has been adapted to the claims as amended and as such also meets the requirements of the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to grant a patent in the following version:

Description:
Pages 1 to 3 and 5 to 8 filed with the entry into the regional phase.
Pages 4a, 10 and 11 filed with letter dated 15 June 2010.
Pages 4 and 9 communicated to the appellant by telefax on 30 June 2010.

Claims:
Nos. 1 to 41 filed with letter dated 15 June 2010.

Drawings:
Sheets 1/3 to 3/3 filed with the entry into the regional phase.

The Registrar: The Chairman:

M. Kiehl A. G. Klein