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**Datasheet for the decision  
of 27 November 2007**

**Case Number:** T 0486/06 - 3.4.02

**Application Number:** 03007604.6

**Publication Number:** 1327881

**IPC:** G01N 27/49

**Language of the proceedings:** EN

**Title of invention:**  
Hollow electrochemical cell

**Applicant:**  
LifeScan, Inc.

**Opponent:**  
-

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. -

**Relevant legal provisions (EPC 1973):**  
EPC Art. 76(1), 123(2)

**Keyword:**  
"No basis for the amendments in the present divisional application and its parent application as originally filed"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 0486/06 - 3.4.02

**D E C I S I O N**  
of the Technical Board of Appeal 3.4.02  
of 27 November 2007

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

**Representative:** Smaggasgale, Gillian Helen  
W.P. Thompson & Co  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 11 November 2005  
refusing European application No. 03007604.6  
pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** A. Klein  
**Members:** M. Stock  
C. Rennie-Smith

## Summary of Facts and Submissions

I. The applicant and appellant has appealed against the decision of the examining division refusing European patent application No. 03 007 604.6 (publication EP 1 327 881 A1) for added subject-matter. The examining division reasoned in particular that the substitution in claim 1 of "allowing an analyte to wick into the cell" for "admitting an analyte to the cell" was not derivable from the application documents as originally filed. Therefore claim 1 according to the main request and the auxiliary request contravened Article 123(2) EPC. Moreover, the examining division reasoned that the claimed subject-matter was not new over any of the following documents:

D1: US-A-5399256

D2: US-A-4554064

D3: JP-A-05002007; & PATENT ABSTRACTS OF JAPAN,  
vol. 17, no. 258 (P-1540)

II. The arguments of the appellant, set out under "Grounds of Appeal" in its letter dated 17.03.2006 can be summarised as follows:

As to the objection of the examining division that there was no basis for the feature of the opening allowing an analyte to wick into the cell, reference could be made to Figure 12 of the application as filed. It was established practice that the skilled man would read the document, in this case the application as filed including its description and Figure 12, in such

a way that the product described, i.e. the cell, would actually function. It would be understood that as part of this requirement the sample had to enter the cell and, since there was no pump or injector, the only way the sample could enter was by capillary wicking action. It was also noted that much of the teaching of the application as filed related to the sample diffusing through the cell. It was acknowledged that much of this teaching related to the arrangement in which a membrane was present in the cell, i.e. an embodiment which was not claimed in this application. However, this disclosure taught the skilled man that he was looking at the type of sensor in which the sample was introduced into the cell by diffusion/wicking etc. There was no teaching nor suggestion in the application as filed of an open tube with a pump to draw the sample into the cell.

In the event that the Board of Appeal decided to consider novelty and inventive step, it was observed that D1 related to a detector electrode for use with chromatography systems and thus related to a system in which the analyte flowed. In this connection, it was noted that the apparatus had both an inlet and an outlet for liquid. A pump was required to pump the liquid continuously through the analyser. Thus D1 did not disclose an opening for allowing an analyte to wick into the cell.

As in D1, the arrangement described in D2 related to a system through which the fluid to be tested flowed. The fluid was fed through an inlet and an outlet. Since it was apparent that D2 related to a flow system, it did

not relate to a cell in which the analyte wicked into the cell.

The arrangement described in D3 was also a flow cell system which required a pump and an injector device. Thus, the system did not allow an analyte to wick into the cell.

With its letter dated 01.08.2007 the appellant filed the following three documents to be considered by "the examiner":

Russian Patent No. RU2046361. A copy of both the Russian and English language versions was enclosed.

Simultaneous Determination of Diffusion Coefficient and Concentration by Chronoamperometry at a Microdisk Electrode; Jung et al.; and

Diagnostic Criteria for the Study of Chemical and Physical Processes by Twin Electrode Thin-Layer Electrochemistry; Anderson et al.

III. In an annex to summons to oral proceedings requested by the appellant, the Board stated in accordance with preliminary non-binding comments that the objections under Article 76(1) and 54(1) EPC were maintained. In case these issues could be resolved in favour of the appellant, the Board would consider remitting the case to the examining division for further consideration.

IV. In the oral proceedings which took place on 27 November 2007, the appellant requested that a patent be granted on the basis of claims according to a main request and

alternatively according to first and second auxiliary requests filed on 26 October 2007. The second auxiliary request is distinguished from the first one by the deletion of certain dependent claims objected to by the Board under Article 76(1) EPC.

V. Versions of claim 1 according to the main and auxiliary requests, respectively, read as follows:

1. A hollow electrochemical cell comprising a working electrode (5), a counter electrode (6), and an opening (31) for allowing an analyte to wick into the cell, the working electrode (5) being spaced from the counter electrode (6) by less than 500  $\mu\text{m}$ .

1. A hollow electrochemical cell comprising a working electrode (5), a counter electrode (6) and one opening (31), said opening allowing an analyte to wick into die cell, the working electrode (5) being spaced from the counter electrode (6) by less than 500  $\mu\text{m}$ .

## **Reasons for the Decision**

1. *Main request*

1.1 "To wick" used in claim 1 according to the main request requires a porous material, which is present as a membrane 1 in the embodiments shown in Figures 1 to 11. Figure 12 is related to the only embodiment comprising a hollow cell of the type defined in claim 1 having a cavity 32. According to column 2, line 57 to column 3, line 1 of the A-publication an opening 31 is provided on one side of the cell whereby a sample can be

admitted into the cavity 32. Evidently there is no porous material and consequently no wicking action. Rather, it is left open how the sample is introduced. This could be by pumping, capillary action, etc. However, there is no specific disclosure whatsoever of any of these.

1.2 The appellant has argued that the skilled person, having read the description of the embodiments in the present application, would understand that the first type of embodiments, as shown in Figures 1 to 11, is related to a cell including a porous membrane for allowing an analyte to wick into the cell, whereas a second type of embodiments, which is shown in Figure 12, does not use such a membrane. However, it was evident to the skilled person that the analyte was still allowed to enter the hollow cell by capillary forces, i.e. by wicking, due to the small dimensions of the opening and the small spacing between the electrodes. From Wikipedia, the internet encyclopaedia, it was found that "capillary action" is a synonym for "wicking". Thus no wick in the shape of porous material was necessary to provide wicking. A small opening as shown in Figure 12 would be sufficient to ensure an analyte to wick into the cell.

1.3 This argument, however, does not persuade the Board. The verb "to wick" is found in the entire application only at two places, namely in paragraphs 0029 and 0031, see the A1-publication, which are clearly in the context of the description of the first type of embodiments employing a porous membrane which allows the analyte to wick throughout the cell. So in the context of the present application "wicking" is

connected with the presence of a wick in form of the porous membrane. Therefore the skilled person would conclude that in the embodiment of Figure 12 which explicitly uses no membrane, wicking does not occur. Wikipedia's article defining "wicking" as a synonym to "capillarity" is noted. However, an example given in this article is related to some modern sport fabrics which use capillary action to "wick" sweat away from the skin. This definition is consistent with the interpretation that "wicking" presupposes a "wick", which is present in the form of fabrics in the example and referred to there as "wicking fabrics".

1.4 Therefore, while taking due account of the arguments of the appellant, the Board concludes that the subject-matter of claim 1 according to the main request is not derivable directly and unambiguously from either the present divisional application or from the parent application as originally filed.

2. *First auxiliary request*

2.1 Claim 1 according to this request differs from claim 1 according to the main request in that the cell comprises "one opening" instead of "an opening". The purpose of this limitation is to exclude cells having an inlet and an outlet for an analyte to flow through the cell. It can be left open whether such limitation is disclosed in the original documents in view of the fact, that this claim, which relies also on the embodiment shown in Figure 12, still recites the feature "wicking" which extends beyond the content of the original documents.



3. *Second auxiliary request*

3.1 This request is directed to the deletion of certain dependent claims to which objections regarding their original disclosure had been raised, in case a main claim had been accepted by the Board. This is, however, not the case.

4. *Conclusion*

4.1 The amendments according to claim 1 of the main and first auxiliary requests lead to subject-matter extending beyond the content of the present divisional and its parent application as originally filed contrary to the requirements of Articles 123(2) and 76(1) EPC, respectively. Hence, there is no room for considering novelty and inventive step of the claimed subject-matter.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

M. Kiehl

A. G. Klein