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**Datasheet for the decision  
of 13 July 2022**

**Case Number:** T 0396/18 - 3.3.05

**Application Number:** 12710734.0

**Publication Number:** 2697388

**IPC:** C12Q1/00

**Language of the proceedings:** EN

**Title of invention:**

IMPROVED DIFFUSION LAYER FOR AN ENZYMATIC IN-VIVO SENSOR

**Patent Proprietors:**

F. Hoffmann-La Roche AG  
Roche Diagnostics GmbH

**Opponent:**

Abbott Diabetes Care Inc.

**Headword:**

Glucose sensor/Hoffmann-La Roche

**Relevant legal provisions:**

EPC Art. 56  
RPBA Art. 12(4)  
RPBA 2020 Art. 13(2)

**Keyword:**

Inventive step - (no)

Late-filed auxiliary requests - requests not examined by the  
opposition division

Amendment after summons - exceptional circumstances (no)

**Decisions cited:**

T 2429/17

**Catchword:**



**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

**Case Number: T 0396/18 - 3.3.05**

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.05**  
**of 13 July 2022**

**Appellant:** F. Hoffmann-La Roche AG  
(Patent Proprietor 1) Grenzacherstrasse 124  
4070 Basel (CH)

**Appellant:** Roche Diagnostics GmbH  
(Patent Proprietor 2) Sandhofer Straße 116  
68305 Mannheim (DE)

**Representative:** Weickmann & Weickmann PartmbB  
Postfach 860 820  
81635 München (DE)

**Appellant:** Abbott Diabetes Care Inc.  
(Opponent) 1360 South Loop Road  
Alameda, CA 94502 (US)

**Representative:** Mathys & Squire  
The Shard  
32 London Bridge Street  
London SE1 9SG (GB)

**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
18 December 2017 concerning maintenance of the  
European Patent No. 2697388 in amended form.**

**Composition of the Board:**

<b>Chairman</b>	G. Glod
<b>Members:</b>	S. Besselmann
	O. Loizou

## Summary of Facts and Submissions

- I. The appeals in this case, by the patent proprietors (appellant 1) and the opponent (appellant 2), lie from the opposition division's interlocutory decision that the European patent EP 2 697 388 B1 in the form of the then pending auxiliary request 2 met the requirements of the EPC. The patent in suit concerns an improved diffusion layer for an enzymatic *in-vivo* sensor.
- II. The following documents, cited during opposition proceedings, are referred to:
- D4 WO 92/13271 A1
  - D8 WO 2010/028708 A1
  - D10 Experimental Report by Appellant 1, dated 19 September 2016
  - D11 Pure & Appl. Chem., "Source-based nomenclature for copolymers (Recommendations 1985)", vol. 57, 10, 1985, 1427-40
  - D13 Experimental Report by Appellant 1, dated 21 July 2017
  - D17 Huntsman, "A guide to thermoplastic polyurethanes (TPU)", 2010
- III. With the grounds of appeal, the patent proprietors (appellant 1) defended the patent in amended form on the basis of a main request and 17 auxiliary requests, auxiliary request 9 being identical to the request upheld by the opposition division. Appellant 1 submitted three new auxiliary requests 8, 11 and 20 on 12 November 2021 and renumbered the previously filed auxiliary requests so that previous auxiliary requests 8 and 9 became new auxiliary requests 9 and 10 and previous requests 10-17 became new auxiliary requests

12-19. A corrected copy of the clean version of new auxiliary request 8, showing the correct number of this request, was provided on 3 December 2021.

IV. Independent claim 1 of the main request relates to an electrode system and reads as follows:

*"1. Electrode system for measuring the concentration of an analyte under in-vivo conditions, comprising an electrode with immobilized enzyme molecules and a diffusion barrier that controls diffusion of the analyte from the exterior of the electrode system to the enzyme molecules, characterized in that the diffusion barrier comprises a block copolymer having at least one hydrophilic block and at least one hydrophobic block, wherein a hydrophilic block is made from hydrophilic monomeric units selected from hydrophilic (meth)acrylesters with a polar, e.g. OH, OCH<sub>3</sub> or OC<sub>2</sub>H<sub>5</sub> group, hydrophilic (meth)acrylamides, (meth)acrylic acid or combinations thereof."*

V. Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the references to "an analyte" and "the analyte" have been replaced by "glucose".

VI. Claim 1 of auxiliary request 2 differs from claim 1 of the main request in that the expression "*, and wherein a hydrophobic block is made from hydrophobic monomeric units selected from hydrophobic (meth)acrylesters, styrene-based monomers or combinations thereof*" is added at the end of the claim.

Auxiliary request 2 contains a further independent system claim 2 which differs from claim 1 of the main request in that the expression "*, and wherein the glass*

*transition temperature of the hydrophobic block is between 40 and 100°C*" is added at the end of the claim.

- VII. Claims 1 and 2 of auxiliary request 3 differ from claims 1 and 2 of auxiliary request 2 in that the references to "an analyte" and "the analyte" have been replaced by "glucose".
- VIII. Independent claims 1 and 2 of auxiliary requests 4 and 5 differ from the corresponding claims of auxiliary requests 2 and 3, respectively, in that the term "at least" in "*at least one hydrophilic block*" is deleted.
- IX. Independent claims 1 of auxiliary requests 6 and 7 are identical to independent claims 2 of auxiliary requests 2 and 3, respectively.
- X. Independent claim 1 of auxiliary request 8 is identical to independent claim 1 of auxiliary request 5 and is the only independent system claim in this request.
- XI. Independent claim 1 of auxiliary request 9 is identical to independent claim 1 of auxiliary request 2 and is the only independent system claim in this request.
- XII. Auxiliary request 10 differs from auxiliary request 9 in that the analyte is specified to be glucose, as in auxiliary request 3.
- XIII. Claim 1 of auxiliary request 11 differs from claim 1 of auxiliary request 10 in that the alternatives "*styrene-based monomers or combinations thereof*" are deleted and in that instead the feature "*wherein the hydrophilic blocks and the hydrophobic blocks consist of (meth)acrylic-based monomeric units*" is added at the end of claim 1.

- XIV. Independent claim 1 of auxiliary request 12 differs from claim 1 of auxiliary request 9 in that the following feature is added at the end of the claim:  
"*and wherein*  
*(i) a hydrophilic block of the block copolymer has a length of from 50-200, or from 150-300, particularly from 100-150, or from 200-250 monomeric units and/or*  
*(ii) a hydrophobic block of the block copolymer has a length of from 50-200, or from 150-250, particularly from 80-150, or from 170-200 monomeric units*".
- XV. Claim 1 of auxiliary request 13 differs from claim 1 of auxiliary request 12 in that the analyte is specified to be glucose, as in auxiliary request 1, and additionally in that the "and/or" conjunction linking features (i) and (ii) has been replaced by "and".
- XVI. Claim 1 of auxiliary request 14 reads as follows:  
  
*"1. Electrode system for measuring the concentration of an analyte under in-vivo conditions, comprising an electrode with immobilized enzyme molecules and a diffusion barrier that controls diffusion of the analyte from the exterior of the electrode system to the enzyme molecules, characterized in that the diffusion barrier comprises a block copolymer having at least one hydrophilic block and at least one hydrophobic block, wherein a hydrophilic block is made from hydrophilic monomeric units selected from:*  
*2-hydroxyethyl acrylate,*  
*2-hydroxyethyl methacrylate (HEMA),*  
*2-methoxyethyl acrylate,*  
*2-methoxyethyl methacrylate,*  
*2-ethoxyethyl acrylate,*



2-ethoxyethyl methacrylate,  
2- or 3-hydroxypropyl acrylate,  
2- or 3-hydroxypropyl methacrylate (2- or 3-HPMA),  
2- or 3-methoxypropyl acrylate,  
2- or 3-methoxypropyl methacrylate,  
2- or 3-ethoxypropyl acrylate,  
2- or 3-ethoxypropyl methacrylate,  
1- or 2-glycerol acrylate,  
1- or 2-glycerol methacrylate,  
acrylamide,  
methacrylamide,  
an N-alkyl- or N,N-dialkyl acrylamide, and  
an N-alkyl- or N,N-dialkyl methacrylamide,  
wherein alkyl comprises 1-3 C-atoms,  
acrylic acid,  
methacrylic acid  
and combinations thereof,  
wherein a hydrophobic block is made from hydrophobic  
monomeric units selected from:  
methyl acrylate,  
methyl methacrylate (MMA),  
ethyl acrylate  
ethyl methacrylate (EMA),  
n- or i-propyl acrylate,  
n- or i-propyl methacrylate,  
n-butyl acrylate,  
n-butyl methacrylate (BUMA),  
neopentyl acrylate,  
neopentyl methacrylate,  
and combinations thereof,  
and wherein  
(i) a hydrophilic block of the block copolymer has a  
length of from 50-200, or from 150-300, particularly  
from 100-150, or from 200-250 monomeric units  
and/or

*(ii) a hydrophobic block of the block copolymer has a length of from 50-200, or from 150-250, particularly from 80-150, or from 170-200 monomeric units."*

- XVII. Auxiliary request 15 differs from auxiliary request 14 in that the analyte is specified to be glucose, as in auxiliary request 1.
- XVIII. Auxiliary requests 16 and 17 differ from auxiliary requests 14 and 15, respectively, in that the list from which the hydrophilic monomeric units are selected is limited to "*2-hydroxyethyl methacrylate (HEMA)*" and the list from which the hydrophobic monomeric units are selected is limited to "*methyl methacrylate (MMA), ethyl methacrylate (EMA), n-butyl methacrylate (BUMA) or combinations thereof*".
- XIX. Claim 1 of auxiliary requests 18 and 19 differ from the claim 1 of auxiliary requests 16 and 17, respectively, in that the "*and/or*" conjunction linking features (i) and (ii) has been replaced by "*and*".
- XX. Auxiliary request 20  
Claim 1 of auxiliary request 20 reads as follows:
- "1. Electrode system for measuring the concentration of glucose under in-vivo conditions, comprising an electrode with immobilized enzyme molecules and a diffusion barrier that controls diffusion of glucose from the exterior of the electrode system to the enzyme molecules, characterized in that the diffusion barrier comprises a block copolymer having at least one hydrophilic block and at least one hydrophobic block, wherein the hydrophilic block is made from hydrophilic monomeric units selected from 2-hydroxyethyl methacrylate (HEMA), and wherein the hydrophobic block*

*is made from hydrophobic monomeric units selected from methyl methacrylate (MMA), ethyl methacrylate (EMA), n-butyl methacrylate (BUMA) or combinations thereof, and wherein*

*(i) the hydrophilic block of the block copolymer has a length of from 50-200, or from 150-300, particularly from 100-150, or from 200-250 monomeric units and/or*

*(ii) the hydrophobic block of the block copolymer has a length of from 50-200, or from 150-250, particularly from 80-150, or from 170-200 monomeric units."*

XXI. The opponent (appellant 2) was of the opinion that auxiliary requests 2-8, 11 and 20 should not be admitted into the proceedings. They raised objections of, *inter alia*, lack of inventive step against the independent claims of all the requests.

XXII. Oral proceedings were held on 13 July 2022 by videoconference.

XXIII. Appellant 1's arguments relevant to the present decision can be summarised as follows.

Regarding auxiliary request 20, the claimed invention differed from D4 not only in the monomeric units from which the hydrophilic and hydrophobic blocks were made and the feature relating to the block length, but also in that the enzyme molecules were an integral part of the electrode. Furthermore, the reference to hydrophilic and hydrophobic segments in D4 did not specifically disclose blocks according to the IUPAC definition (D11) but encompassed individual monomeric units.

Starting from D4 as the closest prior art, the objective technical problem was providing an electrode having a diffusion barrier with improved permeability characteristics. This improvement was evidenced by D13. Copolymer B could not be taken as counter evidence because it was not within the functional definition set out in the claim. By contrast, copolymer B was meant to test the boundaries of the invention, and the patent provided sufficient instructions on how to modify it to achieve the desired function.

Even if the technical problem were merely the provision of an alternative, combining the teachings of D4 and D8 would not have led the skilled person to the claimed invention. D8 disclosed statistical copolymers, as was clear from them having a single glass transition temperature. Using statistical copolymers was in accordance with the teaching of D4. The skilled person thus had no reason to change these to what was a block copolymer in accordance with the IUPAC definition. Furthermore, the skilled person learnt from Example 2 of D4 that acrylate based polymers were used for a different purpose and would therefore have been discouraged from using acrylate based copolymers for preparing a glucose diffusion barrier.

Auxiliary requests 2-7 should be taken into account under Article 12(4) RPBA 2007. Auxiliary requests 2, 4 and 6 had been filed before the opposition division and were therefore in the proceedings. The ranking order of these request was changed during opposition proceedings to submit a new request directly addressing an objection raised by the opposition division; this should not be held against the patent proprietors.

If the board did not admit these requests, the case should be remitted to the opposition division.

Auxiliary requests 8 and 11 should also be taken into account. Auxiliary request 8 was derived from auxiliary request 5 by deleting the objected to alternative independent claim wording. Its submission was a direct response to the board's preliminary opinion that auxiliary requests 2-7 might not be admissible. Auxiliary request 11 addressed the issue that only a small part of the indicated hydrophilic and hydrophobic blocks could be made from the indicated monomeric units. This issue had been newly raised in the board's preliminary opinion.

- XXIV. Appellant 2's arguments are reflected in the reasons for the decision.
- XXV. Appellant 1 (patent proprietors) requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request filed with the statement of grounds of appeal or, alternatively, using the new numbering set out under item III. above, on the basis of one of auxiliary requests 1 to 20; of which auxiliary requests 1 to 7 were filed with the statement of grounds of appeal, auxiliary request 8 with the letter dated 12 November 2021, auxiliary request 9 with the statement of grounds of appeal, auxiliary request 10 with the statement of grounds of appeal (being the request upheld by the opposition division), auxiliary request 11 with the letter dated 12 November 2021, auxiliary requests 12-19 with the statement of grounds of appeal and auxiliary request 20 with the letter dated 12 November 2021.

Appellant 2 (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

## **Reasons for the Decision**

### **Auxiliary request 20**

1. Inventive step
  - 1.1 The impugned patent relates to an electrode system for measuring the concentration of an analyte, in particular glucose, under *in-vivo* conditions comprising an electrode with immobilised enzyme molecules and a diffusion barrier that controls diffusion of the analyte from body fluid surrounding the electrode system to the enzyme molecules (paragraph [0001]). An object of the invention is to provide a diffusion barrier which provides desirable physico-chemical characteristics and which can be manufactured easily (paragraph [0009]).
  - 1.2 D4 is considered to be the closest prior art.
    - 1.2.1 D4 relates to an implantable device for determining the amount of glucose in a biological fluid. The device includes at least two electrodes and a membrane having different diffusion rates for glucose and oxygen (page 6, lines 4-27). D4 thus relates to a similar purpose and is a suitable starting point for assessing inventive step.
    - 1.2.2 The electrode system known from D4 constitutes "an electrode with immobilized enzyme molecules". This

feature in claim 1 at issue does not imply any specific spatial arrangement of the electrode and the immobilised enzyme but encompasses embodiments in which the electrode is in some way combined with immobilised enzyme molecules, for instance via further layers.

According to D4, the membrane has at least one layer formed by a non-porous block copolymer having hydrophobic segments and hydrophilic segments that limits the amount of a substance passing through it (page 7, lines 21-27; page 22, lines 13-23; claim 3). This layer constitutes a diffusion barrier within the meaning of claims 1 and 10 under consideration in that it affects the diffusion of reactant, i.e. glucose, from the exterior of the electrode system to the enzyme molecules.

Appellant 1 argued that the term "block copolymer" did not have its usual meaning in D4 and that the "segments" were not necessarily polymeric blocks, as could be seen in the examples. In their view, Example 1 of D4 showed that a preformed hydrophilic block was copolymerised with monomeric hydrophobic units so that no hydrophobic block of a defined size was obtained. In Example 2, two different monomeric units were copolymerised. In appellant 1's view, this yielded a statistical copolymer, meaning that using a statistical copolymer was in accordance with the teaching of D4.

Appellant 2 disagreed with appellant 1's interpretation of the examples. In their view, the copolymer of Example 1 of D4 was a block copolymer in accordance with the IUPAC definition, as could be taken from D17 (page 6) showing the chemistry of this example. According to appellant 2, the addition sequence in Example 2 was such that a block copolymer was obtained.

Example 2 was furthermore irrelevant because it did not relate to a layer for controlling diffusion of glucose.

- 1.2.3 In any case, even if there were doubts as to the precise nature of the copolymers obtained in these examples - of which Example 2 does not relate to controlling the diffusion of glucose but to the layer nearest the anode, i.e. the inner layer (page 27, lines 16-20) - D4 clearly discloses a block copolymer having hydrophobic segments and hydrophilic segments which are polymeric blocks. This derives from the specific segments disclosed in D4 which are polymers (page 22, lines 13-23). There is no indication that the skilled person would be unable to put this general disclosure into practice. D4 thus anticipates using a block copolymer having at least one hydrophilic block and at least one hydrophobic block within the meaning of claims 1 and 10 at issue.

In conclusion, the distinguishing features are to be seen in the monomeric units from which the specified hydrophilic and hydrophobic blocks are made and in the feature relating to the length of the hydrophilic and/or the hydrophobic block.

- 1.3 According to appellant 1, the technical problem is the provision of an electrode having a diffusion barrier with improved permeability characteristics (paragraph [0011]; examples).
- 1.4 As the solution to this technical problem, the patent proposes the electrode system of claim 1, in which the hydrophilic block is made from hydrophilic monomeric units selected from HEMA, and the hydrophobic block is made from hydrophobic monomeric units selected from



MMA, EMA, BUMA or combinations of these and in which (i) the hydrophilic block has a length of from 50-200 or 150-300 monomeric units and/or (ii) the hydrophobic block has a length of from 50-200 or 150-250 monomeric units.

- 1.5 It is established case law that if the inventive step of a claimed invention is based on a given technical effect, the latter should, in principle, be achievable over the whole area claimed (Case Law of the Boards of Appeal of the EPO, 9th edn., 2019, I.D.4.3).

Permeability characteristics are described in the examples of the impugned patent and also in experimental reports D10 and D13. It is shown that the molecular ratio of hydrophobic to hydrophilic blocks and the molecular weight of the copolymer (table in paragraph [0061], paragraphs [0064] and [0065]) affect the sensitivity and thus the permeability for glucose, as does the composition of the hydrophobic blocks (paragraph [0080]).

Block copolymer B is shown to exhibit a very low sensitivity and permeability (paragraph [0065] and Figure 5) even though it falls within the scope of the independent claims. Namely, copolymer B has a hydrophilic block made of HEMA and a hydrophobic block made of BUMA, and the hydrophilic block has a length of 169 monomeric units (see the table in paragraph [0061]). The poor performance of copolymer B does not exclude it from the scope of the claim. Claim 1 at issue refers to the intended function as a "*diffusion barrier that controls diffusion of glucose from the exterior of the electrode system to the enzyme molecules*", but this does not imply any particular suitability, such as a particular permeability or

selectivity for glucose. The claim contains no additional limitation on the choice of the block copolymer.

Thus, it cannot be accepted that the desired improved permeability characteristics are achieved across the entire scope of the claim. It is irrelevant here that the description provides a reason for the poor permeability of block copolymer B (paragraph [0065]) so that the skilled person might derive guidance on how to improve it.

- 1.6 The objective technical problem thus needs to be redefined in a less ambitious manner and is merely the provision of an alternative.
  
- 1.7 The skilled person starting from D4 and wishing to provide an alternative would find alternative monomeric units for producing the hydrophilic and hydrophobic segments of the block copolymer for example in D8. They would turn to D8 because it relates to the same field of providing electrode systems for the *in-vivo* measurement of glucose (page 1, first two paragraphs) and also addresses the question of providing a diffusion barrier that restricts the diffusion of glucose (page 5, second paragraph; page 9, lines 19-24).

D8 teaches the use of a copolymer of hydroxyethyl-methacrylate, for example a copolymer of methyl-methacrylate and hydroxyethylmethacrylate (page 9, line 26 to page 10, line 12). It would therefore have been obvious for the skilled person to employ these monomeric units known from D8 to provide the block copolymer with hydrophobic segments and hydrophilic segments taught in D4. This is even more so as D8

mentions acrylate as an alternative to polyurethane (page 13, last paragraph), polyurethane copolymers being preferred in D4 (page 23, lines 12-20; Example 1). Using a copolymer of methylmethacrylate is also in accordance with the general teaching of D4 where polymethylmethacrylate and polyurethane, among others, are listed as alternatives, and block copolymers are mentioned (page 7, lines 5-12).

Moreover, D8 is only relied on for identifying these alternative monomer types. It is therefore not decisive that D8 does not disclose block copolymers.

The observation that Example 2 of D4 describes a copolymer layer made from dimethylaminoethyl methacrylate and acrylonitrile for a different purpose is irrelevant because these monomeric units are not the same as those disclosed in D8.

Employing the monomeric units known from D8 to prepare the block copolymer with hydrophobic segments and hydrophilic segments taught in D4 would result in a block copolymer having a hydrophilic HEMA block and a hydrophobic MMA or BUMA block. The skilled person would readily select the length of one of these blocks such that one of the alternative ("and/or") requirements in claims 1 and 10 is met, this choice being arbitrary in view of the not very ambitious objective technical problem posed.

In conclusion, the skilled person would arrive at the subject-matter of claim 1 without the need to perform an inventive step.

2. Admittance of the request

2.1 The question of whether auxiliary request 20 should not be admitted can be left open because this request is not allowable for lack of inventive step.

**Main request and Auxiliary requests 1, 9, 10 and 12-19**

3. Inventive step

3.1 Having discussed inventive step for auxiliary request 20, appellant 1 acknowledged that the same considerations applied to the main request and auxiliary requests 1, 9, 10 and 12-19 (see minutes page 3).

3.2 The main request and auxiliary requests 1, 9, 10 and 12-19 are therefore not allowable for lack of inventive step either.

**Auxiliary requests 2-7**

4. Admittance of these requests into the appeal proceedings.

4.1 Auxiliary requests 2, 4 and 6 had been filed before the opposition division but not dealt with because the ranking of the requests was changed by the patent proprietors during the oral proceedings before the opposition division so that they then ranked lower than the auxiliary request which was upheld.

4.2 These requests are part of the patent proprietors' appeal and not a defence against the opponent's appeal

in that they do not further limit the request upheld by the opposition division.

4.3 In contrast to the requests dealt with by the opposition division, auxiliary requests 2 and 4 each contain two independent claims defining the electrode system. While the first independent system claim is similar to claim 1 of the auxiliary request upheld by the opposition division, the second independent system claim provides an alternative definition of the hydrophobic blocks by reference to a parameter. Auxiliary request 6 contains only one independent system claim and is based on this alternative definition.

Auxiliary requests 3, 5 and 7 merely differ from auxiliary requests 2, 4 and 6, respectively, in that the analyte is specified to be "glucose". These requests, however, contain the same alternative definition of the hydrophobic blocks by reference to a parameter.

4.4 The indicated alternative independent claim wording constitutes an entirely different case. Although several of these requests were filed before the opposition division, what is decisive here when dealing with their admittance into the appeal proceedings is that the patent proprietors prevented the opposition division from dealing with this alternative independent claim wording by changing the ranking order of their requests during the opposition proceedings.

4.5 Dealing with this alternative independent claim wording for the first time during the opposition appeal proceedings would be contrary to the aim of opposition-

appeal proceedings, which is the judicial review of the decision of the opposition division.

- 4.6 Auxiliary requests 2-7 are therefore not admitted into the appeal proceedings (Article 12(4) RPBA 2007 in conjunction with Article 25 RPBA 2020).

#### **Auxiliary requests 8 and 11**

5. Admittance of the requests into the appeal proceedings.

- 5.1 Auxiliary requests 8 and 11 were first filed on 12 November 2021 in reply to the board's communication pursuant to Article 15(1) RPBA 2020 and after the summons to oral proceedings had been notified. Thus, the provisions of Article 13(2) RPBA 2020 apply.

According to Article 13(2) RPBA 2020 any amendment shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

The board may also rely on the criteria stipulated in Article 13(1) RPBA 2020, which includes taking into consideration whether an amendment, *prima facie*, overcomes the objections raised and does not give rise to new objections (T 2429/17, Reasons 2.2).

- 5.2 Auxiliary request 8

- 5.2.1 Appellant 1 was of the opinion that auxiliary request 8 should be admitted as a response to the board's objection that auxiliary request 5 might not be admissible; it merely differed from auxiliary request 5 in that independent claims 2 and 17 were deleted.

5.2.2 The Board is not satisfied that exceptional circumstances justified the filing of auxiliary request 8 at this stage.

The objection against the admissibility of auxiliary request 5 had been raised by appellant 2 in their reply to the patent proprietors' appeal (point 5.1 of the reply). There was consequently no need to wait for the board's preliminary opinion to address this issue.

Moreover, on a *prima facie* basis, the mere deletion of the term "at least" from the feature "having at least one hydrophilic block" does not clearly provide the intended limitation to a single hydrophilic block, in particular as the claim subsequently refers to a hydrophilic block. Furthermore, the definition of the monomeric units is still broad, and the lengths of the blocks is undefined. On a *prima facie* basis, there is consequently no reason why inventive step should be assessed differently to in point 3 above.

5.3 Auxiliary request 11

5.3.1 Auxiliary request 11 is based on auxiliary request 10 (the latter was filed as then auxiliary request 9 with the statement of grounds of appeal) and is meant to address the issue that only a small part of the indicated hydrophilic and hydrophobic blocks could be made from the indicated monomeric units.

5.3.2 The Board is not satisfied that exceptional circumstances justified the filing of auxiliary request 11 at this stage.

The issue that the claim encompassed embodiments in which only a small part of the indicated hydrophilic and hydrophobic blocks were made from the indicated monomeric unit was only a sub-aspect of the preliminary opinion on inventive step of previous auxiliary request 9, which generally was in line with appellant 2's arguments (see in particular point 4.2.2.3 of appellant 2's reply to the appeal). It therefore cannot be said that the board's preliminary opinion confronted appellant 1 with a new objection.

In addition, on a *prima facie* basis, there is no reason why addressing only this sub-aspect should change the assessment of inventive step. There is no reason why inventive step should be assessed differently to in point 3 above. Moreover, on a *prima facie* basis, the amendment is unsuitable to provide the intended limitation and results in a lack of clarity. It is unclear whether "the hydrophilic blocks and the hydrophobic blocks" are all the hydrophilic and hydrophobic blocks in the copolymer or whether reference is merely made to the preceding mention of "a hydrophilic block" made from monomeric units selected from hydrophilic (meth)acrylesters with a polar group, hydrophilic (meth)acrylamides, (meth)acrylic acid or combinations thereof and the preceding mention of "a hydrophobic block" made from hydrophobic (meth)acrylesters.

5.4 Auxiliary requests 8 and 11 are therefore not admitted into the appeal proceedings (Article 13(2) RPBA 2020).



**Request to remit the case to the opposition division**

6. Appellant 1 requested that the case be remitted to the opposition division for dealing with auxiliary requests 2-7.
7. However, these requests were not admitted into the proceedings (point 4.6). Consequently, they cannot form the basis for a remittal.

**Order**

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

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



C. Vodz

G. Glod

Decision electronically authenticated