

Internal distribution code:

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

D E C I S I O N
of 2 October 2003

Case Number: T 0810/00 - 3.3.5

Application Number: 97919017.0

Publication Number: 0920353

IPC: B01J 13/00

Language of the proceedings: EN

Title of invention:

Aqueous solution compositions comprising polymer hydrogel compositions

Applicant:

UNILEVER PLC, et al

Opponent:

-

Headword:

Hydrogel compositions/UNILEVER

Relevant legal provisions:

EPC Art. 123(3), 54(3)

Keyword:

"Admissibility of disclaimer: not decided in view of pending referrals"

"Novelty: no (both requests) - functionally defined lower limit of a parameter (viscosity) range - claimed sub-range arbitrarily chosen - difference in wording but not in substance - clear and unmistakable implicit disclosure in prior art of viscosities falling in the claimed sub-range"

Decisions cited:

T 0451/99, T 0507/99, T 0433/86, G 0001/03, G 0002/03,
T 0943/93, T 0450/89, T 0279/89, T 0198/84

Catchword:

-



Case Number: T 0810/00 - 3.3.5

D E C I S I O N
of the Technical Board of Appeal 3.3.5
of 2 October 2003

Appellant:

UNILEVER PLC
Unilever House
Blackfriars
London EC4P 4BQ (GB)

Representative:

Rots, Maria Johanna Francisca
Unilever PLC
Patent Division
Colworth House
Sharnbrook
Bedford MK44 1LQ (GB)

Decision under appeal:

Decision of the Examining Division of the
European Patent Office posted 10 March 2000
refusing European application No. 97919017.0
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: R. K. Spangenberg
Members: B. P. Czech
M. B. Günzel

Summary of Facts and Submissions

- I. The appeal is from the decision of the examining division posted 10 March 2000 refusing the European patent application 97 919 017.0.
- II. The decision was taken on the basis of an amended set of claims. Claim 1 thereof has the following wording (amendments made during the examination appear in **bold**):

"1. An aqueous composition comprising:

(a) 40-95% by weight **of an** aqueous solution **containing 5-50% surfactant and** having a viscosity greater than 300 centipoises **and less than 1500 centipoises**; and

(b) 5% to 60% by wt. of a hydrogel composition comprising:

(i) 0.1 to 30% by wt. hydrogel composition of at least one polymer soluble in water which polymer is insolubilized when placed in the aqueous solution of item (a);

(ii) 0.2 to 30% by wt. hydrogel composition of a polymer soluble in water, and soluble or dispersible in the aqueous solution of item (a); and

(iii) 1.0 to 60% water insoluble benefit agent entrapped in a network formed by (i) and (ii);

wherein **the** particles of **the** benefit agent (iii) have particle size of 0.2 to 200 micrometers;

wherein **the** hydrogel is greater than 25 micrometers;

wherein the size of the hydrogel (b) is greater than that of the benefit agent; **and wherein the hydrogel comprising composition is formed by injecting a hydrogel precursor solution into the aqueous solution**

or by co-extruding the hydrogel precursor solution in the aqueous solution."

III. In the contested decision the examining division *inter alia* held that the subject-matter of this claim lacked novelty (Article 54(3)(4) EPC) in view of

D4: WO-A-96/29979.

In support of this finding, the examining division argued that "D4 explicitly mentions all features of present claims 1, 9 and 10 in combination and by way of specific examples, except the now limited range of viscosity >300 to <1500 centipoises) of the aqueous solution", but that "D4 does, however, include this amended range below 1500 cps in its general disclosure, since the range of suitable viscosities is preferably at least 1500 cps, lower viscosities thus being possible albeit not preferred". Considering that the examples 1 to 11 retained in the present application as amended and examples 3 to 13 of D4 were "identical in subject-matter" and the "explicit assertion by the applicant that these present examples fall into the scope of the present claims", the examining division came to the conclusion that "D4, although not specifically disclosing this now limited range of viscosity in terms of numerical values, inevitably uses aqueous solutions having the presently claimed viscosity by virtue of said essentially identical examples with identical subject-matter".

In additional remarks concerning deficiencies not forming grounds for the decision, the examining division pointed out that the introduction of the

disclaimer-like feature "less than 1500 centipoises" did not comply with the requirements of Article 123(2) EPC, *inter alia* because this feature did not impart novelty to the claimed subject-matter. However, the examining division also expressed the view that "the amendment to the claims, considered for themselves, do not render the subject-matter novel, since a sub-range is selected from the range of D4, which (i) is not sufficiently far removed from the preferred range disclosed in D4, being directly adjoined thereto, and (ii) leads to no new technical effect occurring therein".

IV. Upon appeal, the appellant filed two amended sets of claims as main and auxiliary request, respectively.

In comparison to claim 1 underlying the contested decision,

- (a) the lower limit of the viscosity range was amended to include the value of 300 centipoises, with the expression "greater than 300" being replaced by "at least 300" (claim 1 of main request) and by "of from 300" (claim 1 of auxiliary request), respectively;
- (b) claim 1 according to both requests was modified by a reference to the conditions under which the said viscosity was to be measured, namely "at a shear rate of 10 sec^{-1} at 25°C "; and
- (c) in claim 1 according to the auxiliary request, the upper viscosity limit was amended to read "**to 1000 centipoises**".

As a precautionary measure, the appellant requested oral proceedings.

Citing decisions T 450/89 of 15 October 1991 (not published in the OJ EPO), T 943/93 of 30 August 1994 (not published in the OJ EPO) and T 279/89 of 3 July 1991 (not published in the OJ EPO), the appellant rejected the lack of novelty objection of the examining division. Citing decision T 433/86 of 11 December 1987 (not published in the OJ EPO), it submitted that the introduction of the feature "less than 1500 cps" did not contravene Article 123(2) EPC.

- V. The appellant was summoned for oral proceedings. In the annex to the summons, the board *inter alia* objected to the clarity of the claims, and questioned the admissibility of the disclaimer-like feature contained in the respective claims 1 of all requests. Concerning novelty, the board *inter alia* drew the appellant's attention to the similarity of the paragraphs bridging pages 6 and 7 of D4, and pages 20 and 21 of the present application as filed, respectively. It indicated that in its provisional view the quoted passage of D4 did not exclude viscosity values lower than 1500 cps, and that this passage could be considered to give a functional definition of a lower viscosity limit value. Hence, the board considered it arguable whether the limitations introduced in the respective claims 1 of all requests could establish novelty over D4.

- VI. With its letter dated 1 November 2002, the appellant filed a reply comprising three sets of amended claims and corresponding description pages to replace the ones

on file, labelled main, first auxiliary and second auxiliary request, respectively. It maintained that the claimed subject-matter was novel over D4.

In the respective claims 1 according to all the new requests the previous expression

"wherein the hydrogel is greater than 25 micrometers; and wherein the size of the hydrogel (b) is greater than..."

has been replaced by the expression

"wherein the hydrogel **particle size** is greater than 25 micrometers; and wherein the **particle** size of the hydrogel (b) is greater than..."

The claims according to the second auxiliary request are identical to the ones of the first auxiliary request, but the corresponding description pages differ. In the description according to the second auxiliary request, several examples have been deleted.

With the same letter, the appellant withdrew its request for oral proceedings and requested the matter to be decided on the basis of the papers on file.

VII. The appellant's arguments, as far as they are relevant for the present decision, can be summarised as follows.

Concerning the disclaimer-like feature, it pointed out that the value of 1500 cps was disclosed in D4. Referring to decision T 433/86, it argued that since the disclosure of D4 and the claimed subject matter

overlapped, the former could be excluded even in the absence of support for the excluded matter in the present application as filed. Concerning novelty, the appellant essentially argued that D4 did not clearly and unmistakably disclose the use of an aqueous surfactant solution having a viscosity of at least 300 and less than 1500 cps, let alone less than 1000 cps, under the indicated measuring conditions. The examples of D4 did neither explicitly mention the viscosities of the surfactant solutions used nor the exact way of preparing them. Although the aqueous surfactant compositions used according to the examples 1 to 11 retained in the present application and in the corresponding examples of D4 included the same ingredients in the same ratios, they would not necessarily have, due to the use of some specific gel forming ingredients, the same viscosities, since the latter could be altered by physical means. The examples of D4 could be formulated to have a wide range of viscosities and the mere hypothetical possibility that they could be formulated to have a viscosity below 1500 cps was insufficient to support an objection that the claimed subject-matter lacks novelty. When putting the invention of D4 into practice, the skilled person would prepare the compositions such that the surfactant solution had a viscosity of at least 1500 cps, because this was what was disclosed in D4. The paragraph bridging pages 6 and 7 was not sufficient to provide an absolute definition of a minimum viscosity. The skilled person was not provided with sufficient information regarding the viscosity to be able to use this statement to define a minimum value for a range of viscosities. By selecting a viscosity of less than

1500 cps, the skilled person would go against the teaching of D4.

Concerning the first auxiliary request, it argued that no range other than the open-ended range of at least 1500 cps was disclosed in D4, and certainly not the range of from 300 to less than 1500 cps, let alone the range of from 300 to 1000, the latter being clearly disclosed in the present application as filed. Moreover, even if the subject-matter of the present claims was to be considered as a selection invention, which the appellant considered to be inappropriate, the application of the criteria for selection inventions as set out in decision T 279/89 would still lead to the same result. The sub-range of 300 to 1000 cps was narrow, sufficiently removed from the preferred range of D4, and implied that the claimed compositions would have different properties due to the use of aqueous surfactant solutions with a viscosity which was so different from that preferably used in D4.

Concerning the second auxiliary request, it submitted that although the claims were identical to the ones according to the first auxiliary request, the description had been substantially amended by the deletion of those examples which relied upon specific surfactant solution formulations. Therefore, there could be no confusion regarding the disclosure of D4 in the light of the specification of the second auxiliary request.

VIII. The appellant requested that a patent be granted on the basis of the claims filed as main request with its letter dated 1 November 2002 or, in the alternative, on

the basis of the claims filed with the same letter as first auxiliary request. As second auxiliary request, the appellant requested that a patent be granted on the basis of the claims according to the first auxiliary request, but with a further amended description, filed with the same letter.

Reasons for the Decision

1. *Amendments - All requests*

1.1 During the present appeal proceedings, the respective claims 1 according to all requests have been amended, in comparison to claim 1 underlying the impugned decision,

(a) by specifying (see "at least" and "from") that the value of 300 centipoises is included in the range of viscosities;

(b) by including a reference to the method to be used for measuring the value of the viscosity; and

(c) by specifying (twice) that the hydrogel is present as "particles".

1.2 The board is satisfied that the amendments (a) to (c) fulfil the requirements of Articles 123(2) and 84 EPC. More particularly, they are clear and based on the following passages of the application as filed. Concerning features (a) and (b) see page 21, lines 2 to 5, and concerning feature (c) see e.g. page 5, lines 3 to 5.

Main request

2. Amendment - The feature "less than 1500 centipoises"

Several questions concerning the admissibility of disclaimers have recently been referred under Article 112(1)a) EPC to the Enlarged Board of Appeal, see the headnotes of decisions T 451/99, OJ EPO, 2003, 334, and T 507/99, OJ EPO, 2003, 225, which both refer to decision T 433/86, and which are pending under the case numbers G 1/03 and G 2/03, respectively.

Therefore, the present board was not in a position to take a final decision concerning the admissibility, under Article 123(2) EPC, of the inclusion of the disclaimer-like feature "less than 1500 centipoises" in claim 1. However, this issue needs not to be dealt with in the present case since, as will be shown below, the subject-matter of claim 1 lacks novelty in any case.

3. *Novelty - Claim 1*

3.1 In the impugned decision the opposition division reached the conclusion that the subject-matter of the amended claim 1 then on file was known from D4. The contents of D4 undisputedly belong to the state of the art pursuant to Article 54(3)(4) EPC for all the designated Contracting States (DE, ES, FR, GB and IT) for which designation fees were paid upon entry into the regional phase before the EPO. In the present appeal proceedings the appellant has not contested that D4 discloses compositions meeting the compositional and product-by-process-type definitions of the compositions according to present claim 1. In view of the contents

of the file, the board insofar shares the view of the examining division. Acknowledging an overlap of the disclosure of D4 with the said definitions, the appellant has only contested the said finding of the examining division to the extent that, in its view, D4 does not disclose compositions wherein the aqueous surfactant solutions to be used have viscosity values below 1500 cps, let alone within the numerical range specified in present claim 1. This is what remains to be examined.

- 3.2 In the paragraph bridging pages 6 and 7 of D4, it is pointed out that the stability of the hydrogel suspensions to be obtained is a critical feature, requiring that the viscosity of the aqueous, surfactant comprising component, within which the hydrogel particles are dispersed, has a sufficiently high low-shear viscosity to prevent settling or creaming of the final composition during storage. Further according to the said passage, stable suspensions "can be achieved by utilising liquid compositions formulated to have a viscosity of **preferably** at least 1,500 cps, and most preferably at least 3,000 cps at a shear rate of 10 sec⁻¹ at 25°C", and "this viscosity is generally sufficient to stably suspend the hydrogel compositions". In the said passage, D4 also generally indicates that, "as the particle size of the hydrogel dispersion increases, liquids that have a higher viscosity are required to achieve adequate stability". In the following paragraph of D4, the careful selection of surfactants or the inclusion of thickeners are mentioned as well-known methods for increasing the viscosity.

3.3 In the board's view, the skilled person gathers from this passage of D4 that in order to be capable of suspending the dispersed hydrogel particles to form a stable suspension, the aqueous cleansing surfactant solution must generally be formulated, using known components, such as to have a sufficiently high low-shear viscosity at a shear rate of 10sec^{-1} at 25°C . Hence, the board holds that the indications in the said passage of D4 provide a functional definition of the minimum viscosity necessary for achieving a stable hydrogel suspension, which viscosity of course depends on the specific composition of the mixture and the size of the hydrogel particles to be suspended. The appellant has merely contested this view, without, however, providing any convincing counter-argument. The board notes that according to D4, a viscosity of at least 1500 cps is "generally" sufficient to form stable suspensions. However, the value of 1500 cps is only mentioned in D4 as a **preferred** lower limit of a range of suitable viscosity values, and cannot, for this reason alone, be considered as an absolute minimum value for all of the compositions actually disclosed in generic form. Although the board accepts that an "absolute definition of a minimum viscosity" other than 1500 cps, in the sense of a single viscosity value generally guaranteeing the stability of all dispersions meeting the compositional and gel particle size requirements of claim 1 of D4 is not expressly disclosed, it does not share the appellant's point of view according to which the information provided is not sufficient to define a "minimum value for a range of viscosities" other than the 1500 cps actually mentioned. The board considers the general information provided by the cited passage of D4 to be clear and complete in the

sense that a minimum viscosity is functionally defined in relation to each of the multitude of compositions generically disclosed in D4. No other part of D4 conveys information pointing to the contrary. The board thus holds that from the use, by the authors of D4, of the term "preferably", in combination with the information contained in the remainder of the same paragraph, the skilled person understands that the preparation of compositions as defined in claim 1 of D4, wherein aqueous cleansing surfactant solutions to be used having viscosities lower than 1500 cps and meeting the mentioned functional definition, i.e. leading to dispersions of sufficient stability, are clearly disclosed, although not preferred, and not only as a "hypothetical possibility" as in the case underlying decision T 0943/93 (see point 2.5 of the reasons). On the contrary, the skilled person would understand that an increase of the viscosity beyond the required minimum value was not necessary with respect to the stability of the hydrogel composition upon storage, and would thus seriously contemplate to apply the teaching of D4 down to the functionally defined minimum viscosity for each of the individual compositions generically disclosed therein. Since the quoted passage of D4 cannot be considered to be obscure or self-contradictory, and contains much more than a stray reference to lower viscosities, the board holds that the said disclosure of D4 is clear and unmistakable, unlike in the case underlying decision T 450/89 (see point 3.11 of the reasons).

3.4 Hence, the board concludes that the use of aqueous cleansing surfactant solutions having viscosities which are lower than 1500 cps, and in particular viscosities which are slightly lower than but close to the preferred 1500 cps, and hence higher than 300 cps, although being less preferred, was disclosed by D4 in connection with the preparation of compositions otherwise falling within the terms of present claim 1.

3.5 Therefore, the subject-matter of claim 1 lacks novelty and the main request cannot be allowed.

First auxiliary request

4. Amendment - The feature "from 300 to 1000 centipoises"

On page 21, lines 2 to 5, of the present application as filed, several minimum viscosity values are indicated, i.e. 300, 1000 and 3000 cps, in the order of increased preference. The question of whether the application as filed can actually be considered to disclose the specific range of 300 to 1000 cps in combination with all the other features of present claim 1, although values higher than 1000 cps and higher than 3000 cps were presented as preferred and more preferred, respectively, in the application as filed, and hence whether the said amendment is admissible under Article 123(2) EPC, need not be dealt with in the present decision, since, as will be shown below, the (remaining) subject-matter of claim 1 in any case lacks novelty.

5. *Novelty - Claim 1*

5.1 As explained above, the disclosure of D4 is not restricted to the use of aqueous surfactant solutions having viscosities of 1500 cps or more. It remains to be seen whether D4 discloses the use of aqueous surfactant solutions with viscosity values in the range of from 300 to 1000 cps stipulated by present claim 1.

5.2 In the passage bridging pages 20 and 21 of the application in suit, which is very similar in wording to the quoted passage of D4, the appellant states, concerning the aqueous solution to be used, that "a viscosity of at least 300 cps is **generally** sufficient to stabilise large hydrogel dispersions" and that "as the particle size of the hydrogel dispersion increases, liquids that have a higher viscosity are required to achieve adequate stability". In the subsequent paragraph on page 21 of the present application, the same methods for increasing the viscosity are mentioned as in D4. According to both D4 and the present application, the minimum particles size of the hydrogel is 25 μm , see the respective claims 1.

5.3 In the same way as the application in suit discloses the viscosity range of 300 to 1000 cps as a suitable albeit not preferred range of viscosities, D4 discloses as a suitable but not preferred range the viscosities from a value "sufficiently high to prevent settling of the hydrogel composition under the action of gravity during storage" to 1500 cps. D4 as well as the present application require a viscosity sufficient to prevent the settling of the hydrogel suspension upon storage as a critical feature of the respective compositions. In

both D4 and the present application, it is stated that the necessary minimum viscosity to achieve this goal is dependent on the particle size of the hydrogel dispersion.

5.4 From the quoted passages of the application in suit, the board concludes that a viscosity of 300 cps is sufficient to stabilise a large number (see "generally") of the compositions falling under present claim 1, at least the ones having a hydrogel particle size from 25 μm to "large". Considering the substantial overlap of the generic definitions of the compositions disclosed in D4 and of the compositions according to present claim 1, respectively, in terms of their composition, preparation and hydrogel particles sizes, a viscosity of 300 cps must thus inherently also be sufficient for stabilising a large number of the compositions disclosed in D4. Therefore, the functional lower limit of the viscosity value as disclosed in D4 must be at least as low as 300 cps for the said large number of compositions.

5.5 The board has to accept the appellant's submission that it is well known to those skilled in the art that the viscosity of an aqueous surfactant solution comprising gel-forming ingredients does not only depend on its composition, but also on the way it is made, and that a skilled person can change the viscosity thereof e.g. by varying the degree and extent of shear mixing. As pointed out in the impugned decision, the examples of the application as filed retained upon appeal (now labelled 1 to 11) are essentially identical with the examples of D4 in terms of the composition and preparation of the hydrogel suspensions. In both cases

these examples are, however, silent about the viscosities of the aqueous solutions used. It follows therefrom that the skilled person would necessarily have to perform routine tests in order to explore the missing conditions for preparing compositions such as those disclosed in the examples of D4 in order to establish fulfilment of the said critical requirement of sufficient viscosity. It is clear from the above that the board is of the opinion that in doing so, the skilled person was not led away from but would, on the contrary, seriously contemplate the use of aqueous surfactant solutions having viscosities of less than 1500 cps, provided that a stable final suspension is obtained.

Performing such tests with compositions according to D4 which meet all the compositional and preparation method requirements of present claim 1 will thus inevitably result in arriving at compositions wherein the viscosities of the surfactant solutions are within the range now claimed, since the viscosities within this range belong to those which meet the composition stability requirement. Consequently, D4 provides a clear and unmistakable implicit disclosure of compositions wherein the viscosity of the surfactant solution falls within the claimed range.

- 5.6 Moreover, the board cannot find that the more general criteria for acknowledging novelty of subject-matter defined by ranges of parameters which are selected from or overlap with known ranges, as developed by the boards of appeal, are met in the present case, see e.g. T 279/89, point 4. of the reasons and T 198/84, OJ EPO 1985, 205, point 7 of the reasons.

- 5.6.1 As set out above (see point 5.4), for a large number of the compositions disclosed in D4, the viscosity range of 300 to 1000 cps of present claim 1 must be totally encompassed in the viscosity range from the functionally defined lower limit, which may be different for each individual composition, to 1500 cps as disclosed in D4. Hence the range of 300 to 1000 cps cannot be regarded as "narrow" in view of the range disclosed in D4.
- 5.6.2 As indicated above, the example according to D4 and the examples retained in the application in suit are silent about the viscosities of the aqueous solutions used. Moreover, the only example of the present application as filed (see original example 16, no longer retained upon appeal) which explicitly mentions these viscosities refers to viscosities as high as 3500 cps and 15000 cps, i.e. to viscosities lying in the range presented as most preferred in the application as filed. Under these circumstances, the examples of the present application retained upon appeal (now labelled examples 1 to 11) cannot be taken into consideration in the assessment of the novelty of the viscosity range stipulated by present claim 1, which was the least preferred range according to the application as filed.
- 5.6.3 As pointed out by the appellant, an aqueous surfactant solution having a viscosity of 300 to 1000 cps is different from the preferred aqueous solutions of D4, which have a viscosity of 1500 cps or more. The corresponding hydrogel compositions obtained will obviously also differ in viscosity, and hence in their rheology. However, according to both D4 and the

application as filed, the sole identified purpose of increasing the viscosity is to ensure the stability of the final compositions. The application in suit does not mention any particular property or effect of the claimed compositions which would be obtained in addition to the required stability and which could be attributed to the incorporation of a solution with a viscosity of 300 to 1000 cps. Neither has the appellant specifically pointed out any such property or effect.

5.6.4 Hence, even when applying the mentioned novelty criteria, the board comes to the conclusion that the range of 300 to 1000 cps singled out in present claim 1 is arbitrarily chosen and only creates a difference in wording, but not in substance, when compared with the disclosure of D4, see also T 279/89, point 4.1 of the reasons.

5.7 For the above reasons, the subject-matter of claim 1 is found to lack novelty. Accordingly, the first auxiliary request cannot be allowed either.

Second auxiliary request

6. *Claim 1 - Novelty*

6.1 Claim 1 according to the first auxiliary request and claim 1 according to the second auxiliary request are identical in wording. Hence, the assessment of the novelty of their subject-matter must lead to the same result.

- 6.2 In its reply to the summons, the appellant has submitted "that there can be no confusion regarding the disclosure of D4 in the light of the specification of the second auxiliary request". The appellant did not, however, indicate any reasons for which the disclosure of the prior art document D4 could possibly be modified or clarified by amending the wording of the description of the application in suit, and in particular by deleting some of the examples contained in it. In particular, the appellant did not indicate which specific features of the disclosure of D4 would have to be seen in a different light, and in how far these specific features would have to be perceived differently depending on the presence or absence of the proposed amendments to the description.
- 6.3 Neither is the board aware of any reason which could justify a different assessment of the disclosure of D4 based on the amendments carried out in the description of the application in suit. This position of the board could be expected by the appellant. Hence, the board did not consider it necessary to issue a further communication before taking the present decision.
- 6.4 Since the subject-matter of claim 1 according to the first auxiliary request lacks novelty, the same is thus true for the subject-matter of the second auxiliary request. Consequently, the second auxiliary request cannot be allowed either.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

U. Bultmann

R. Spangenberg