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D E C I S I O N
of 18 February 1999

Case Number: T 0723/94 - 3.3.2

Application Number: 84301513.2

Publication Number: 0119056

IPC: A61K 31/685

Language of the proceedings: EN

Title of invention:
Surfactant composition and pharmaceutical compositions containing same for use in the treatment of respiratory distress syndrome

Patentee:
Tokyo Tanabe Company Limited

Opponent:
Byk Gulden Lomberg Chemische Fabrik GmbH

Headword:
Surfactant composition/TOKYO TANABE CO

Relevant legal provisions:
EPC Art. 56, 54

Keyword:
"Main, first, second, third auxiliary requests - novelty: no"
"Inevitable result of a disclosed process"
"Auxiliary requests five to six"
"Inventive step - no - obvious to try"

Decisions cited:
T 0012/81, T 0181/82, T 0303/86

Catchword:

-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0723/94 - 3.3.2

D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 18 February 1999

Appellant: (Opponent)
Byk Gulden Lomberg Chemische Fabrik GmbH
Postfach 10 03 10
78403 Konstanz (DE)

Representative:
-

Respondent: (Proprietor of the patent)
Tokyo Tanabe Company Limited
2-6, Nihonbashi-honcho 2-chome
Chou-ku
Tokyo 103-8405 (JP)

Representative:
Skailes, Humphrey John
Frank B. Dehn & Co.
European Patent Attorney's
179 Queen Victoria Street
London EC4V 4EL (GB)

Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted 12 July 1994 concerning maintenance of European patent No. 0 119 056 in amended form.

Composition of the Board:

Chairman: U. Oswald
Members: J. Riolo
J. van Moer

Summary of Facts and Submissions

I. European Patent No. 0 119 056 based on application No. 84 301 513.2 was granted on the basis of 26 claims.

Claim 1 as granted reads as follows:

"A surfactant composition comprising a choline phosphoglyceride and an acid phospholipid, characterized in that the surfactant composition additionally contains a fatty acid or its analogue and a lipoprotein derived from the lung of a mammal and further characterized in that the choline phosphoglyceride content is 50.6 to 85.0%(w/w), the acid phospholipid content is 4.5 to 37.6%(w/w), the fatty acid or its analogue content is 4.6 to 24.6%(w/w) and the lipoprotein content is 0.1 to 10.0%(w/w), all based on the total weight of the surfactant composition."

II. Opposition was filed against the granted patent by the Appellant. The patent was opposed under Article 100(a) EPC, for lack of novelty and lack of inventive step.

The following scientific paper, cited during the proceedings before the Opposition Division, remains relevant for the present decision:

J. Jap. Med. Soc. Biol. Interface (1982), 13(2), 27-50 (87-110).

An English translation of pages 27 to 50 (87-110) of this paper was provided during the Opposition procedure

by the Respondent (Patentee) and forms basis for the present decision.

The said translation corresponds to document A1 (pages 1 to 22), document A3 (pages 1 to 19) and document A4 (pages 1 to 24).

III. The interlocutory decision of the Opposition Division posted on 12 July 1994 established that the patent could be maintained under Article 106(3) EPC on the basis of claim 1 as amended during oral proceedings on 5 July 1994, of the claims 2 to 8, 10 to 26 as granted and of the accordingly adapted description.

Said amended claim 1 reads as follows:

"A surfactant composition comprising a choline phosphoglyceride and an acid phospholipid, characterized in that the surfactant composition additionally contains a lipoprotein derived from the lung of a mammal and a fatty acid or analogue thereof, said analogue being an alkali metal salt of a fatty acid, an alkyl ester of a fatty acid, a fatty acid amide, a fatty alcohol, an aliphatic amine or a glyceride of a fatty acid selected from monopalmitin and monostearin, or a mixture thereof, and further characterized in that the choline phosphoglyceride content is 50.6 to 85.0%(w/w), the acid phospholipid content is 4.5 to 37.6%(w/w), the fatty acid or its analogue content is 4.6 to 24.6%(w/w), and the lipoprotein content is 0.1 to 10.0%(w/w), all based on the total weight of the surfactant composition."

For the assessment of novelty and inventive step both

parties agreed that documents A1, A3 and A4 were the most relevant prior art disclosure and that they should be considered as one single publication relating to one study.

The Opposition Division took the view that, having regard to the differences in the method of isolating of the (lipo)protein described in A1 and A3 (such as sonication instead of stirring, different chromatography conditions, different collected void volume fractions), to the fact that the phospholipds/protein ratio described in reference examples 1 and 2 of the patent-in-suit were different from the ratio described in A3 and to the fact that triacylglycerols were not present in the compositions of the patent-in-suit, the claimed subject-matter was novel.

The Opposition Division also concluded that documents A1, A3 and A4 contained no incentive to change the compositions described therein by eliminating the triacylglycerols and changing the phospholips/(lipo)protein proportion to arrive at the compositions of the patent-in-suit in order to solve the problem to find the truly essential components and their specific proportions for a pulmonary surfactant.

IV. The Appellant lodged an appeal against the said decision.

V. Oral proceedings were held before the Board on 17 February 1999 during which six auxiliary requests were submitted by the Respondent:

Claim 1 of auxiliary request I differs from claim 1 of the set of claims proposed for the interlocutory decision in that "A surfactant composition" has been replaced by "A **blended** surfactant composition"

Claim 1 of auxiliary request II differs from claim 1 of the set of claims proposed for the interlocutory decision in that "a lipoprotein derived from the lung of a mammal" has been replaced by "**an isolated** lipoprotein derived from the lung of a mammal".

Claim 1 of auxiliary request III reads as follows:

"A surfactant composition comprising a choline phosphoglyceride and an acid phospholipid, characterized in that the surfactant composition additionally contains a lipoprotein derived from the lung of a mammal **and containing protein and phospholipid in the ratio 23.4 - 48.0 parts by weight protein to 47.9 - 70.2 parts by weight phospholipid** and a fatty acid or analogue thereof, **said analogue being an alkali metal salt of a fatty acid, an alkyl ester of a fatty acid, a fatty acid amide, a fatty alcohol, an aliphatic amine or a glyceride of a fatty acid selected from monopalmitin and monostearin or a mixture thereof,** and further characterized in that the choline phosphoglyceride content is 50.6 to 85.0%(w/w), the acid phospholipid content is 4.5 to 37.6%(w/w), the fatty acid or its analogue content is 4.6 to 24.6%(w/w), and the lipoprotein content is 0.1 to 10.0%(w/w), all based on the total weight of the surfactant composition." (emphasis added).

Claim 1 of auxiliary request IV differs from claim 1 of the set of claims proposed for the interlocutory decision in that the term "comprising" has been replaced by "consisting in".

Claim 1 of auxiliary request V differs from claim 1 of the set of claims of auxiliary request III in that the term "comprising" has been replaced by "consisting in".

Claim 1 of the auxiliary request VI reads as follows:

"A surfactant composition consisting in a choline phosphoglyceride and an acid phospholipid, characterized in that the surfactant composition additionally contains a lipoprotein derived from the lung of a mammal **and containing protein and phospholipid in the ratio 23.4 - 48.0 parts by weight protein to 47.9 - 70.2 parts by weight phospholipid** and a fatty acid or analogue thereof, and further characterized in that the choline phosphoglyceride content is 50.6 to 85.0%(w/w), the acid phospholipid content is 4.5 to 37.6%(w/w), the fatty acid or its analogue content is 4.6 to 24.6%(w/w) and the lipoprotein content is 0.1 to 10.0%(w/w), all based on the total weight of the surfactant composition."

VI. The Appellant's submissions both in the written procedure and at the oral proceedings can essentially be summarised as follows:

For the question of novelty under Article 54 EPC the Appellant took the view that due to the use of the wording "comprising" in claim 1 of the main request and auxiliary requests 1 and 2, the subject-matter of the

patent-in-suit encompassed also the presence of triacylglycerols and that the lipoprotein of A1 was also covered by the present claim independently of its constitution. Accordingly, these subject-matters were not novel over the surfactant disclosed in A1.

Moreover, as the isolation step described in A1, A3 and A4 were almost identical to those of the patent-in-suit, the lipoprotein of the patent-in-suit and the one of the prior art had to be the same. Therefore, the subject-matter of claim 1 of the auxiliary request III, which merely describes further the known lipoprotein, was also anticipated by the prior art.

For the assessment of inventive step the Appellant concluded that the subject-matter of the patent-in-suit was obvious in the light of the disclosure in A1, A3 and A4, which teaches the importance of the four components of the surfactant compositions of claim 1 as regards the surfactant properties as well as the proportions to be used. He moreover stressed that because of the open formulation of the claim, the absence of triacyglycerols could not be taken into account for the inventive step assessment. He also pointed out that the suppression of triacylglycerols from the surfactant composition could in any case not be regarded as inventive since it was taught in A4.

VII. The Respondent contested these arguments. His submissions in support of his requests can be summarised as follows:

As regards the relevant prior art A1, A3 and A4 alleged to destroy novelty of the claimed subject-matter, the

Respondent submitted that the isolation procedure carried out in the prior art differs from the one used in the patent-in-suit in a significant way, so that the obtained components cannot be the same, in particular with respect to the presence of the lipoprotein. As a matter of fact, the procedure used in the patent-in-suit involves neither sonication nor lyophilisation contrary to the final steps of A1 and the chromatography conditions are different compared to A3; in particular A3 does not mention that the void volume has been collected. In that respect a letter dated 17 February 1993 from Tokyo Tanabe Co. to Mr. Skailes containing a definition of the void volume in a chromatography column was submitted. Moreover, the Respondent pointed out that the term "protein" used in the prior art for the protein fraction could not be understood as meaning lipoprotein as the skilled person reading A1, A3, A4 would have had no reason to believe that "protein" did not have its normal and most common meaning (ie simple protein). Extracts from the International Dictionary of Medicine and Biology (i.e. Vol. I, page 178 and 181; Vol. II, pages 1626 and 1627) containing the definition of various terms used in said documents were submitted.

A declaration from the authors of documents A1, A3 and A4, who are also the inventors in respect of the patent in suit, confirming the above analysis was also referred to.

In the Respondent’s view the subject-matter of the patent-in-suit involved an inventive step because A1, A3 and A4 suggested neither that a lipoprotein was present in the prior art surfactants nor that a

lipoprotein could or should be isolated for use as an essential component of an "artificial" surfactant. Moreover, A1, A2 and A4 did not teach that any of the main components disclosed in the prior art (i.e. triacylglycerols) could be omitted from such formulations. On the contrary, each ingredient was presented as essential for achieving good surfactant properties.

VIII. The Appellant requested that the decision under appeal be set aside and that the patent be revoked.

Auxiliarily he submitted that he had no objection against auxiliary request III of the patentee.

The Respondent requested that the appeal be dismissed and that the patent be maintained on the following basis:

- Main request: Documents as provided during the oral proceedings of 5 July 1994 before the Opposition Division.

- First auxiliary request and second auxiliary request as submitted during oral proceedings before the Board.

- Third and fourth auxiliary requests (previous fourth and third filed on 18 January 1999) as modified during the oral proceedings before the Board.

- Fifth and sixth auxiliary requests (previous first and second filed on respectively 11 June 1993 and

17 June 1994) as modified during the oral proceedings before the Board.

Reasons for the Decision

1. The appeal is admissible.

2. There are no objections on the basis of Article 123(2) and (3) EPC to the set of claims of the main request and to the six sets of claims of the auxiliary requests since the claims are adequately supported by the original description and do not extend the protection conferred when compared to the claims as granted. This was not contested by the Appellant.

3. *Novelty*

The Board agrees that documents A1, A3 and A4 constitute one single publication.

Since documents A1, A3 and A4 have been cited as prejudicial to the novelty of the subject matter of the patent in suit it is necessary to discuss this matter in detail.

3.1 Main request

3.1.1 The study published in papers A1, A3 and A4 deals with lung surfactants. The authors first isolated a lung surfactant from bovine lung using a specific preparation procedure (A1) and its composition was analysed. The composition of the isolated lung surfactant was further analysed by fractioning the various constituents of the lung surfactant using column chromatography methods and by testing the surfactant activity of the isolated fractions (A3). The last publication (A4) concerns the reconstruction of lung surfactants by blending the various components considered to be important in the light of the two previous studies. The activity of these artificial lung surfactants was also examined.

According to table 2 in A1, 80.9 % of phospholipids are present in the isolated mammal lung surfactant. Table 3 of A1 shows that they contain 64.9% (64.1% phosphatidylcholine + 0.8% lysophosphatidylcholine) choline phosphoglyceride and 22.6% (10.1% phosphatidylethanolamine + 3.2% phosphatidylserine + 3.6% phosphatidylinositol + 5.7% phosphatidylglycerol) acid phospholipid.

Accordingly, these amounts represent **52.5% of choline phosphoglyceride** and **18.3% of acid phospholipid** of the surfactant composition.

Moreover, table 2 indicates also that **8.4% fatty acids** and **1.6% protein** are present in the isolated mammal lung surfactant.

Since the subject-matter of Claim 1 covers a surfactant composition containing the following ingredients:

(a) 50.6 to 85.0% (w/w) of a choline phosphoglyceride

(b) 4.5 to 37.6% (w/w) of an acid phospholipid

(c) 4.6 to 24.6% (w/w) of a fatty acid or of a selected analogue thereof

(d) 0.1 to 10.0% (w/w) of a lipoprotein derived from the lung of a mammal,

the ingredients (a), (b) and (c) of claim 1 of the main request are known from the disclosure in table 2 of document A1.

Moreover, having regard to the disclosure in A3 on page 15, lines 9 to 16, it appears that a lipoprotein is in fact meant when the generic term "protein" is used.

As a matter of fact, in the above passage relating to the role played by the various constituents of the isolated mammal lung surfactant, it is pointed out that "While the protein present in lung surfactant has been reported to be a contaminant coming from blood[18], there is a report on a protein peculiar to lung surfactant[19]. And, the relation between this protein and surface activity has been studied[20]. This protein is considered to be analogous to the protein present in our lung surfactant, because their behaviour towards organic solvents is similar and **both of them contain phospholipids**." (emphasis added).

In document A1 on page 13, lines 18 to 21, it is also mentioned that this protein peculiar to lung surfactant reported in previous studies "is **a lipoprotein containing a phospholipid** and, unlike ordinary proteins, it is insoluble in water and soluble in organic solvents[27)]." (emphasis added).

Accordingly, the feature (d) of claim 1 of the main request is also known from the disclosure in table 2 of the document A1.

In conclusion, the subject-matter of claim 1 of the main request lacks novelty under Article 54 EPC.

3.1.2 During the proceedings, the Respondent expressed the opinion that the subject-matter of claim 1 of the main request was novel because the claimed composition did not contain triacylglycerols whereas triacylglycerols were always present in the compositions disclosed in A1, A3 and A4 and because the term protein in the prior art would be understood by the skilled reader as meaning free protein rather than lipoprotein.

Concerning the first argument, it is true that triacylglycerols are not to be found among the fatty acid analogues explicitly listed in claim 1. The open wording of claim 1 does not, however, exclude the presence of triacylglycerols from the subject-matter encompassed by the claim. The term "comprising" implies only that **at least** the ingredients (a), (b), (c) and (d) within particular weight ranges have to be present in the claimed composition without any other limitations.

In support of the second argument presented by the Respondent, a declaration from the authors of documents A1, A3 and A4, who are also the inventors in respect of the patent, was referred to. The authors stated that at the time they conducted the experiments described in A1, A3 and A4, they were not aware and did not suspect that a lipoprotein was present in the compositions produced and that the word "protein" in the references was thus intended to have the meaning of free protein.

In determining novelty a prior art document should however be read as it would have been read **by a person skilled in the art**.

Accordingly, only the technical information the skilled person can recognise in a prior art document is of relevance (see 3.1.1); the subjective state of mind of the inventors/authors being immaterial in that respect.

The knowledge of the skilled person in the present case is not restricted to the field of pharmaceuticals; it includes also the field of biochemistry.

The Respondent further argued that as scientific publications numbers 19) and 20) referred to in the passage on page 15, lines 9 to 16, of A3 dealt with a study concerning the apoprotein or apolipoprotein part of the lipoprotein rather than the lipoprotein itself and that moreover said passage teaches that the protein in A3 is analogous to the protein of the prior art (and not to the protein of the patent in suit, which is a lipoprotein), the skilled person would not regard the protein of A3 as a lipoprotein.

The Board cannot follow this reasoning as the passage on page 15, lines 9 to 16, of A3 unambiguously indicates that the isolated protein **contains phospholipids**.

The Board can also not follow the Respondent's view that a protein containing phospholipids does not mean lipoprotein since the term "containing" does not necessarily imply that a complex is present between the protein and the phospholipids. It is true that a complex (of any nature) between the phospholipids and the protein has to be present in order to fulfill the definition of a lipoprotein. It is however clear from document A1 (see page 13, lines 18 to 21), wherein the expression "containing a phospholipid" is also used when referring specifically to a lipoprotein, that a complex is indeed meant in the context of the disclosure.

3.2 Auxiliary request I and II

The first auxiliary request qualifies the surfactant composition of claim 1 as being a **blended** surfactant composition. This feature relates to the method of preparation of the surfactant composition and not to the composition itself.

Nevertheless, even if the Board would understand the subject-matter of claim 1 as a product-by-process claim, the product per se must be novel. In the absence of any distinguishing technical features of the blended composition as such over an extracted composition, the Board concludes that the subject-matter of claim 1 of the auxiliary request 1 is not novel for the reasons

given under 3.1.1.

The second auxiliary request merely indicates that the lipoprotein comprised in the composition is an **isolated** lipoprotein. Again, as no distinguishing feature for the composition as such between a composition containing an isolated lipoprotein and a composition containing a lipoprotein has been demonstrated, novelty of the subject-matter of claim 1 of the second auxiliary request cannot be acknowledged neither.

3.3 Auxiliary request III

3.3.1 Auxiliary request III specifies that the range ratio between the protein and the phospholipid in the lipoprotein is **23.4-48.0 parts by weight protein to 47.9-70.2 parts by weight phospholipid**.

This ratio is not to be found expressis verbis in the prior art disclosure A1, A3 and A4.

However, it is well established in the case law of the Boards of Appeal (e.g. T 12/81, T 181/82, T 303/86) that the inevitable result of carrying out a disclosed process on disclosed starting materials is considered as having been disclosed.

Accordingly, in view of the great technical similarity between the isolation process disclosed in A1 (on page 5, line 18, to page 6, line 18) and the isolation process described in the patent in suit (on page 3, line 55, to page 4, line 14 (step f, first sentence)), the Board concludes that the lipoprotein according to the patent in suit must also be present in the isolated

prior art surfactant composition. It is indeed a general principle in science that the same causes produce the same effects.

Accordingly, the introduction of the range ratio in claim 1 cannot restore the novelty of the subject-matter of claim 1 since it constitutes merely a further characterization of a prior art product.

3.3.2 The Respondent emphasized on one hand that in the prior art process sonication and lyophilisation were used contrary to the process of the patent in suit and on the other that, even if it would be assumed that a lipoprotein was to be present, the protein/phospholipid ratio shown in figure 2 on page 8 of A3 was different from the claimed ratio.

The declaration of the authors was referred to in support of the first argument, as it is stated under paragraph 6 of this document that "The final steps of the extraction of A1 include sonication and lyophilisation and both of these procedures decompose and denature protein, particularly lipoprotein and particularly with lyophilisation."

The Board can however not accept these arguments. Firstly, the lipoprotein isolated in the patent in suit is **also** always lyophilized (general procedure on page 4, line 23, reference example 1 on page 9 lines 63 to 64, reference example 2 on page 10, lines 35 to 36), which contradicts the above statement. Secondly, it is noted that the sonication used in the prior art is just applied to get a suspension. It is therefore not credible in the absence of any evidence that this

treatment would totally impair the lipoprotein.

As regards the protein/phospholipid ratio of figure 2 in A3, the board cannot follow the Respondent's point of view. As a matter of fact, figure 2 shows an elution pattern from a sephadex chromatography. It does not describe the physicochemical properties of the eluted products. Therefore, the **only** technical information the person skilled in the art can derive from this figure is that there is a small phospholipid fraction which has a retention time on sephadex L20 comparable to that of the protein fraction.

3.4 Auxiliary requests IV to VI

In auxiliary requests IV to VI the term "comprising" has been replaced by "consisting in". This restrictive formulation limits the subject-matter of the claim to the ingredients specifically mentioned in the claims. As, contrary to the present surfactant blend, triacylglycerols are always present in the prior art surfactant mixtures and surfactant extracts, the Board recognises the subject-matters of auxiliary requests 4 to 6 as novel.

4. Inventive step

4.1 Auxiliary request IV

4.1.1 The main claim of auxiliary request IV corresponds to claim 1 of the main request with the replacement of the wording "comprising" by "consisting in".

It appears that the subject-matter of claim 1 of

auxiliary request IV is thus directed to a blend of four main ingredients of a surfactant composition. Document A4, which also deals with the reconstruction of artificially blended surfactant compositions, therefore represents the closest state of the art.

Document A4 describes (page 17, line 24, to page 18, line 6) a lung surfactant adjusted to contain 40-50% of DSPC (ie a choline phosphoglyceride), 3% of PG (ie an acid phospholipid), a total of 10-20% of fatty acids and triacylglycerols and 0.5-2.5% of protein (ie a lipoprotein; see 3.) and exhibiting a satisfactorily high activity satisfying two essential criteria for natural surfactant.

It also discloses that DSPC cannot exceed 55% (page 14, lines 20 to 22), that the PG content can be 6% (page 15, lines 19 to 21) and that the contents of fatty acids and triacylglycerols depend on each other because the functions of these components in the surface activity of lung surfactant are analogous to each other (page 16, lines 15 to 19; page 9, lines 6 to 14).

In the light of the prior art blend disclosed in A4, the problem underlying the patent in suit over A4 can be seen in providing an alternative surfactant composition having comparable properties.

The problem is solved by the composition of claim 1.

Since the text of the patent in suit and the working examples highlight the good properties of the claimed surfactant composition, the Board has no reason to

doubt that the technical problem has actually been solved. The Appellant did not contest the results of the said examples.

The question to be answered is thus whether the proposed solution, in the light of either the closest prior art in itself or any other prior document, taken alone or in combination, is obvious for the skilled person faced with the problem defined above.

The Board notes that A4 offers a clear guidance as to the compounds, which are not mandatory in the prior art blend. The skilled person is indeed taught that the contents of fatty acids and triacylglycerols depend on each other because the functions of these components in the surface activity of lung surfactant are analogous to each other and because they can compensate for a deficiency of each other (page 16, lines 15 to 19; page 9, lines 6 to 14). Accordingly, the person skilled in the art, would have contemplated the triacylglycerols and fatty acids content as one of the most preferred candidates for modification and thus would try to provide a composition containing fatty acid without triacyglycerol in order to produce an alternative lung surfactant.

In view of the above it is concluded that the subject-matter of claim 1 of auxiliary request IV does not involve an inventive step.

4.1.2 The Respondent maintained that the protein of the prior art blend could not be the lipoprotein of the patent in suit because A3, which describes the fractioning of the surfactant extract, does not mention that the void

volume of the sephadex chromatography has been collected, whereas the lipoprotein of the patent in suit is in fact in the void volume, and because the chromatography conditions are different. The Respondent also argued that the skilled person would not consider leaving out the triacylglycerols from the prior art surfactant blend as they were described as mandatory compounds for achieving good surfactant properties. Finally, he suggested that the prior art surfactant extract TA-546 acknowledged in the description of the patent in suit (page 2, lines 23 to 45) could equally be regarded as the closest prior art and that an effect could be seen over said disclosure.

With regard to the first point, the Board cannot share the Respondent's conclusions. It is true that document A3 is silent about the collection of the void volume. It appears, however, from A3 that the first eluted product from the sephadex chromatography has been collected. The fact that the lipoprotein of the patent in suit is present in the void volume means merely that it is eluted just at the end of the dead volume because it is excluded from the gel particles, i.e. in other words it simply means that it is the first eluted product.

As the prior art chromatography is performed both on the same chromatographic support (ie gel filtration on sephadex L20) the first eluted product must be the same in both cases since the starting material is the same (point 3.3.1).

The differences in column size and flow rate are moreover not relevant in that respect since they are

simply adapted to the amount of the products to be separated. As long as the chromatographic supports are identical, it is in fact not plausible, at least in the case of separation by gel filtration, that the order of elution could be changed. At the most, overlaps among the various fractions could occur.

The Board notes moreover, having regard to the theoretical definition of the void volume provided in the document submitted by the Respondent during oral proceedings and of the column size, that there is no reason to believe that the fraction containing the protein in A3 does not belong to the void volume.

The Board cannot accept that the prior art surfactant extract TA-546 acknowledged in the description of the patent in suit (page 2, lines 23 to 45) could also be regarded as the closest prior art with respect to the subject-matter of the claims restricted to a surfactant composition consisting of four ingredients. As a matter of fact, contrary to the disclosure in A4, the surfactant TA-546 is not a blend but a complex extract and moreover, it is clearly disclosed as containing a protein rather than a lipoprotein. Accordingly it is immaterial to decide whether the present surfactant compositions provide an effect over TA-546 as this surfactant extract is more remote than the blended surfactant compositions disclosed in A4.

4.2 Auxiliary requests V and VI

Compared to auxiliary request IV, auxiliary request V merely indicates that the range ratio between the protein and the phospholipid in the lipoprotein is

23.4-48.0 parts by weight protein to 47.9-70.2 parts by weight phospholipid.

For the reasons expressed under 3.3.1, the above reasoning remains relevant for this set of claims.

The same applies to auxiliary request VI, which differs from auxiliary request V only in that the list of the specific fatty acid analogues is not mentioned.

5. As none of the sets of claims appears to fulfill all the requirements of the EPC, there is no need to decide on the auxiliary request of the Appellant.

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:

P. Martorana U. Oswald