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Datasheet for the decision of 18 June 2026

Case Number: T 1439/24 - 3.3.04

Application Number: 06835683.1

Publication Number: 1976504

IPC: A61K31/185, A23L33/17, A23L33/16, A23L33/15, A23L33/12, A61K31/20, A61K33/24, A61K45/06, A61K33/32, A61K35/20, A61K31/198, A61K31/202, A61P25/28

Language of the proceedings: EN

Title of invention:

Composition comprising polyunsaturated fatty acids, proteins and manganese and/or molybden for improving membrane composition

Patent Proprietor:

N.V. Nutricia

Opponent:

Société des Produits Nestlé S.A.

Relevant legal provisions:

EPC Art. 56

Keyword:
Inventive step - (no)

Decisions cited:
T 2923/19

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Case Number: T 1439/24 - 3.3.04

D E C I S I O N
of Technical Board of Appeal 3.3.04
of 18 June 2026

Appellant: (Patent Proprietor)	N.V. Nutricia Eerste Stationsstraat 186 2712 HM Zoetermeer (NL)
Representative:	V.O. P.O. Box 87930 2508 DH Den Haag (NL)
Respondent: (Opponent)	Société des Produits Nestlé S.A. Entre-deux-Villes 1800 Vevey (CH)
Representative:	Elkington and Fife LLP Prospect House 8 Pembroke Road Sevenoaks, Kent TN13 1XR (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 14 October 2024 revoking European patent No. 1976504 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairwoman	M. Pregetter
Members:	R. Hauss
	A. Bacchin

Summary of Facts and Submissions

I. European patent No. 1 976 504 (the patent in suit) was granted with a set of twelve claims.

II. The patent in suit was opposed under Article 100(a), (b) and (c) EPC on the grounds that the claimed subject-matter did not involve an inventive step within the meaning of Article 56 EPC, was not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, and extended beyond the content of the application as filed.

III. In the proceedings before the opposition division, the patent proprietor requested that the opposition be rejected and that the patent in suit be maintained as granted. It also filed amended sets of claims of 20 auxiliary requests.

IV. The documents cited in the proceedings before the opposition division included the following:

D5: WO 03/041701 A2

D7: European Commission, Reports of the Scientific Committee for Food (forty-first series), Opinions of the Scientific Committee for Food (1997)

D9, D10, D12: Test Reports filed by the patent proprietor with its reply to the notice of opposition

D15: Alzheimer's & Dement. 2020, 1-12

D16: Alzheimer's & Dement. 6, 1-10 (2010)

D17: Journal of Alzheimer's Disease 31, 225-236 (2014)

D18-D21: Test Reports filed by the patent proprietor by letter of 16 June 2023

D24: L.F.M. van Zutphen et al. (editors), "Principles of Laboratory Animal Science", Elsevier, 2001

V. The decision under appeal is the opposition division's decision revoking the patent in suit, which was based on the finding that, starting from the disclosure of document D5, the claimed subject-matter did not involve an inventive step. This conclusion applied to the main request and all of the auxiliary requests.

VI. The patent proprietor (appellant) filed an appeal against this decision.

VII. With its statement setting out the grounds of appeal, the appellant requested that the decision under appeal be set aside and that the patent be maintained as granted (main request). It also submitted sets of claims of 20 auxiliary requests.

VIII. In two communications under Article 15(1) RPBA sent in preparation for oral proceedings, the board advised the parties of its preliminary considerations on claim construction, sufficiency of disclosure and inventive step.

IX. By letter of 14 April 2026, the appellant withdrew its main request as well as auxiliary requests 1 to 14 and 17 to 20. Auxiliary request 15 was to become the new main request and auxiliary request 16 was to become the new auxiliary request 1.

X. Claim 1 of the ***main request*** of 14 April 2026, which is identical to claim 7 as granted and claim 7 as filed, reads as follows.

1. Composition for improving cognitive function in elderly subjects, the composition having an energy content of 50-120 kcal, a protein content of 1-10 g, a lipids content of lipids [sic] *1-5 g, and a content of digestible carbohydrates of 4-20 g, which composition comprises*

a) 1000-2000 mg DHA + DPA + EPA
b) 30-280 mg of cysteine or taurine
c) 100-1000 mg of phospholipids
d) 0.5-3 mg vitamin B6
e) 50-500 ug [sic] *folic acid*
f) 1-30 ug [sic] *vitamin B12*
g) 0.07-2 mg manganese; and
h) 0.07-2 mg molybdenum

XI. Claim 1 of ***auxiliary request 1*** of 14 April 2026 is identical to claim 1 of the main request, except that the following proviso has been added after feature (h):

with the proviso that the composition comprises 30-280 mg cysteine

XII. Oral proceedings before the board took place on 18 June 2026 in the format of a videoconference. The debate focused on the issue of inventive step of the subject-matter of claim 1. At the end of the oral proceedings, the board announced its decision to dismiss the appeal.

XIII. The arguments of the appellant, where relevant to this decision, can be summarised as follows.

The technical features distinguishing the claimed subject-matter from test diet S2 in document D5 were at least features b), g) and h), i.e. the presence of 30-280 mg cysteine or taurine, 0.07-2 mg manganese and

0.07-2 mg molybdenum. Moreover, the weight ranges defined for the further mandatory components of claim 1 should also be regarded as distinguishing features, including those for polyunsaturated fatty acids, phospholipids and vitamin B6, as the resulting nutrient concentrations (in relation to the content of proteins, lipids and digestible carbohydrates) were generally higher than in diet S2 of D5.

The technical effect linked to the distinguishing features was improved cognitive function in elderly subjects, provided as a synergistic effect, as rendered credible by the post-filed test reports D9, D10, D12, D18, D19, D20 and D21. The post-published reports D15 to D17 on clinical studies assessing the efficacy of Souvenaid® (the appellant's commercial product) confirmed that memory function in elderly subjects could be improved with a composition according to claim 1.

The objective technical problem should thus be formulated as developing a composition for improving cognitive function in elderly subjects.

It would not have been obvious to the person skilled in the art that cysteine, manganese and molybdenum improved cognitive function, let alone that the claimed solution, i.e. the composition characterised by the distinguishing technical features, would provide a synergistic effect in improving cognitive function. Thus, the person skilled in the art would have had no incentive, absent any suggestion in D5, to modify the composition of D5 to correspond to the definition of claim 1.

XIV. The arguments of the opponent (respondent), where relevant to this decision, can be summarised as follows.

The claimed subject-matter lacked an inventive step starting from the disclosure of document D5 for the following reasons.

Claim 1 did not define a dosage unit; it was merely an open-ended composition claim. Since the claimed composition could, therefore, include further components, and this would increase the total weight, it was not possible to derive well-defined concentration ranges from the weight ranges specified in claim 1 that could distinguish the claimed composition from the S2 diet of D5.

While cysteine and manganese were not explicitly mentioned as being components of the S2 diet disclosed in D5 (Table 1), it was common general knowledge that the proteins and minerals in ordinary rat chow (used as the basis for the S2 diet, see D5: page 11, lines 8 to 12) must contain these components. The presence of cysteine and manganese in diet composition S2 was, therefore, implicit. Reference was made in this regard to paragraph [0064] of the patent in suit itself, where it was mentioned that all proteins typically used in food manufacture provided cysteine, and to D24 (Table 6-1 on page 112), which disclosed recommended nutrient allowances for rats, including a recommended range for manganese and a recommended range for "methionine + cystine" (reflecting the presence of cysteine).

At most, the presence of molybdenum might be a technical feature distinguishing the claimed composition from diet S2 of D5.

There was no data on file that demonstrated a technical effect of the claimed composition over the composition of D5. This was also true for Example 1 in the patent in suit. It was furthermore disputed that post-filed experimental data (as relied on by the appellant) could be taken into account in the case in hand since post-filed data could not be used as the only means to establish the credibility of an alleged technical effect. Even if the appellant's post-filed evidence were to be taken into account, it was in any case not relevant since none of the documents in question provided a correct comparison of the claimed subject-matter with the starting point in D5.

Thus, the alleged synergistic effect, or any improvement over the composition of D5, had not been rendered credible.

The objective technical problem should accordingly be formulated as the provision of an alternative nutritionally balanced composition.

Based on common general knowledge, it would have been obvious to include nutritionally relevant components such as molybdenum (and, if regarded as distinguishing technical features, cysteine and manganese).

XV. The parties' requests were as follows.

- The appellant (patent proprietor) requested that the decision under appeal be set aside and that the patent in suit be maintained in amended form on the basis of the claims of the main request or auxiliary request 1, both of which were filed by letter of 14 April 2026.

  The appellant also requested that certain assertions made by the respondent in its reply to

the appeal not be admitted (see page 3 of the appellant's letter dated 1 August 2025).

- The respondent (opponent) requested that the appeal be dismissed. The respondent also requested that the appellant's arguments relating to the non-obviousness of claim 7 on pages 13 to 15 of the statement setting out the grounds of appeal not be admitted.

Reasons for the Decision

1. Patent in suit and claim construction

1.1 The patent in suit seeks to provide neutraceutical or pharmaceutical compositions for improving the composition of cell membranes, with the aim of influencing the interaction between (nerve) cells and improving cognitive function (see the patent in suit, paragraphs [0001] to [0008], [0019] and [0089]).

1.2 The patent asserts that interaction between nerve cells, neurotransmitter release, receptor function and the composition of the membranes of nerve cells are all improved by the administration of compositions according to the invention (see paragraphs [0095] and [0098]).

1.3 Claim 1 of the current main request relates to a composition for improving cognitive function in elderly subjects. It is defined by its energy content of 50 to 120 kcal and the amounts of specified components, namely proteins, digestible carbohydrates, lipids and components a) to h) (see point X. above for the wording of claim 1).

1.4 The definition of component a), i.e. "1000-2000 mg DHA+DPA+EPA", is understood to mean that at least one of DHA, DPA and EPA is present. This is also the understanding of the appellant (see the analysis provided in its letter dated 14 April 2026, page 4, line 4, to page 5, line 8).

1.5 Since improving cognitive function is not necessarily linked to addressing a pathology, the claim is not restricted to a therapeutic application. Thus, the feature "for improving cognitive function in elderly subjects" has to be understood in the sense that the composition must be suitable for such a use.

1.6 The composition of claim 1 is defined in an open-ended manner owing to the use of the terms "having" and "comprises". It may contain further components in addition to those listed in claim 1, such as, for instance, water or non-digestible carbohydrates (which would not affect the energy content). Thus, the composition of claim 1 is not limited to a maximum absolute amount in g, derived from adding the upper limits of the weight ranges specified in claim 1.

1.7 Claim 1 is strictly a product claim. It does not define a dosage unit or a possible dosage regimen (such as information on the administration, and frequency of administration, of specified amounts of nutrients or a particular energy content).

2. Inventive step - main request (Articles 100(a), 52(1) and 56 EPC)

Starting point in the prior art

2.1 It was common ground that inventive step should be assessed starting from the disclosure of document D5.

2.2 Document D5 relates to a preparation for improving the action of receptors, in particular for improving the sensitivity of receptors to neurotransmitters, and to the use of polyunsaturated fatty acids and components having a beneficial effect on methionine metabolism for improving the action of receptors (see D5: page 1, lines 4 and 5, and page 3, lines 24 to 27). It envisages the use of the compositions in the treatment and prevention of impaired memory function or dementia (see claim 12). Thus, the objective of D5 is similar to that of the patent in suit.

D5 sets out (on page 10, lines 31 to 32) that the chronic dietary intake of essential polyunsaturated fatty acids can modulate learning and memory processes by incorporation of these fatty acids into neuronal and glial plasma membranes.

D5 discloses compositions comprising Ω-3 poly-unsaturated fatty acids, in particular DHA and EPA, in combination with further components which may include vitamins B6, B12 and/or folic acid, and envisages their use in the treatment and/or prevention of disorders relating to a disturbed functioning of neurotransmitters, including impaired memory, or in the treatment of dementia (see claims 1, 4 and 11 to 13, and page 5, lines 7 to 9).

Specifically, D5 discloses composition S2 (fed as a test diet in a rodent experiment relating to receptor density in the brain) comprising EPA and DHA (see page 12, Table 1). In D5, 110 g of diet S2 included 0.5 g EPA, 0.37 g DHA, 1 mg folate, 1.72 mg vitamin B6, 0.12 mg vitamin B12, 0.2 g phosphatidylcholine and 0.2 g phosphatisylserine. The diet also contained unspecified proteins used for ordinary rat chow, and minerals including selenium (see page 11, lines 11 to 12, and Table 1). The finding reported in D5 was

that the increased ratio of n-3 fatty acids in combination with additional dietary supplements (as provided in diet S2) enhanced the density of the serotonergic 1A and muscarinic receptors in comparison with a placebo composition (page 11, third paragraph, and Tables 1 and 2).

D5 mentions that nucleotides such as uridine monophosphate, which play an important role in the formation of acetylcholine, may preferably be included (see page 9, lines 19 to 25). Manganese, molybdenum, cysteine and taurine are not explicitly mentioned in D5.

Objective technical problem and solution

2.3 Since claim 1 does not specify a total amount or dosage, and in view of the considerations on claim construction set out in point 1.6 above, the board agrees with the respondent's argument that the weight ranges indicated in claim 1 of the main request do not distinguish the claimed composition from diet S2 of D5.

As a further consideration, the experimental data, derived exclusively from *in vitro* cell assays, cannot in any case provide direct information on concentration-dependent effects on elderly subjects.

2.4 Feature b) of claim 1, i.e. "30-280 mg cysteine or taurine", does not require the presence of both cysteine and taurine. In the following assessment, an embodiment of claim 1 which includes cysteine will be considered.

2.5 It cannot be derived directly and unambiguously from the disclosure in D5 that diet S2 contained any of cysteine, manganese or molybdenum. While the presence of cysteine and manganese may appear plausible and even likely in light of common general knowledge evidenced

by D7 (Table 6-1) and paragraph [0064] of the patent in suit (see point XIV. above), this does not suffice to establish a direct and unambiguous implicit disclosure of these components.

2.6 As a consequence, the presence of cysteine, the presence of manganese and the presence of molybdenum are technical features distinguishing the subject-matter of claim 1 from the disclosure of D5.

2.7 In the following, it will be assumed in the appellant's favour that the composition defined by the technical features of claim 1 is suitable for improving cognitive function in elderly subjects since it contains certain components commonly known to be associated with such a benefit, such as Ω-3 polyunsaturated fatty acids, phospholipids and B vitamins. This is, however, also the case for the compositions of D5, including diet S2.

2.8 The person skilled in the art would infer from the therapeutic indications considered in D5, such as dementia and Parkinson's disease, that the compositions according to D5 and represented, for instance, by diet S2 are suitable also for elderly subjects.

2.9 On this basis, the objective technical problem to be solved may be formulated as providing an alternative composition suitable for improving cognitive function.

2.10 The appellant argued that the claimed composition provided additional benefits in comparison with the composition of D5, including a synergistic interaction. For this argument, the appellant relied on post-filed comparative *in vitro* tests (D9, D10, D12 and D18 to D21) and post-published reports on clinical studies for Souvenaid®, the appellant's commercial product (D15 to D17).

2.11 However, since none of the post-filed and post-published evidence provides a correct comparison of the claimed subject-matter with the starting point in the prior art, it is not possible to conclude on the basis of this data that the claimed composition provides improved efficacy or any other advantage over what is disclosed in D5. This is set out in more detail in points 2.12 to 2.15 below.

2.12 According to the established case law of the boards of appeal, if comparative tests are chosen to demonstrate an inventive step on the basis of an improved effect, the nature of the comparison must be such that the alleged advantage or effect is convincingly shown to have its origin in a distinguishing feature of the claimed subject-matter compared with the starting point in the prior art (see Case Law of the Boards of Appeal of the European Patent Office, 11th edition, 2025, updated online 2026, I.D.4.3.2).

2.13 The following criteria may be of relevance for assessing whether experimental evidence in the form of a comparative test can be regarded as meaningful (see also T 2923/19, Reasons 2.7).

(i) The comparative sample must be adequately representative of the starting point in the prior art (in the case in hand, composition S2 of D5), and the "inventive" sample must be adequately representative of the claimed subject-matter.

(ii) The test has to show that the technical effect observed is linked to a distinguishing technical feature alleged to be responsible for said technical effect. A technical effect cannot be convincingly linked to a particular technical feature if this

feature was not varied in the comparative test, or if several features were varied.

(iii) The alleged technical effect can only be used for the formulation of the objective technical problem if it is also credible that said technical effect can be attained over the entire scope claimed.

2.14 Taking these criteria into account, it is clear that none of the comparative tests described in documents D9, D10, D12 and D18 to D21 provides an appropriate comparison of the claimed composition with composition S2 of D5. No systematic analysis is provided that could demonstrate a specific technical effect or advantage in comparison with the starting point in the prior art.

2.14.1 Diet S2 of D5 combines DHA and EPA as active agents. None of the comparative tests presented in D9, D10, D12 and D18 to D21 reflects this in the comparative composition. Thus, for this reason alone, criterion (i) is not met.

2.14.2 The comparative composition in D9 (medium containing fetal bovine serum and nerve growth factor) does not contain any active components present in diet S2 of D5 (see point 2.14.1 above), and for the test composition (composition E: medium+DHA+cysteine+$MnCl_2$) more than one feature was varied, including the introduction of a feature (DHA) that is neither a mandatory feature nor a distinguishing technical feature of claim 1. This experimental set-up does not meet any of criteria (i), (ii) or (iii).

2.14.3 The comparative composition in D10 (DMEM medium) is not representative of composition S2 in D5 (see point 2.14.1 above). No fewer than eight features were varied for the comparison, as the test composition was supplemented with EPA (not mandatory in claim 1 but

present in composition S2 of D5), cysteine, phospholipids, vitamin B6, folic acid, vitamin B12, manganese and molybdenum. Of these components, several are present in composition S2 of D5 (EPA, phospholipids, folate and vitamins B6 and B12). This experimental set-up does not meet any of criteria (i), (ii) or (iii).

2.14.4 According to D12, the comparative composition was DMEM supplemented with DHA and uridine (the latter is not disclosed in D5 as being a component of diet S2). The test composition was supplemented with the same concentrations of DHA and uridine plus cysteine and manganese. In such a set-up, it cannot be ruled out that any improved (and possibly synergistic) efficacy observed may be due to interactions involving DHA or uridine, especially since both are known to have relevant activity (see, for instance, point 2.2 above). Since neither DHA nor uridine is a mandatory component according to claim 1, at least criterion (iii) is not met, in addition to criterion (i) (see point 2.14.1 above).

2.14.5 A similar assessment and conclusion as in the case of D12 also applies to the experiments described in documents D18 to D21, where the supplementation of the test composition in comparison with the control always included one or more of DHA, DPA and EPA as well as uridine or (in D18) cytidine. Accordingly, it is not possible to rule out the possibility that these components (not mandatory in the current claim 1) are associated with any effect observed. As a consequence, the observed effect(s) cannot be linked to any of the distinguishing technical features.

2.15 The appellant also referred in general to post-published documents D15, D16 and D17, which report the results of clinical studies of the appellant's product Souvenaid®, including the nutrient combination "Fortasyn Connect", in Alzheimer's disease.
A comparison with the starting point in the prior art, i.e. diet S2 in D5, is not provided in these reports.
Apart from phospholipids, vitamins B6 and B12 and folic acid, the relevant nutrient composition Fortasyn Connect comprised EPA, DHA, choline, uridine monophosphate, selenium and vitamins C and E (see D16: Table 1; D17: Table 1). No mention is made in D15 or D17 of cysteine (or taurine), manganese and molybdenum. D16 lists manganese and molybdenum as components of Souvenaid (see Supplementary Table 1). However, since no comparison with a composition according to the relevant prior art represented by document D5 is provided, and Souvenaid contains a mix of many components, no pertinent information about technical effects associated with the distinguishing technical features can be obtained from D15, D16 or D17.

2.16 Irrespective of the question of whether post-filed evidence should be admitted at all, in view of the above analysis none of the post-filed and post-published documents is suitable to show that the claimed composition provides improved efficacy over diet S2 disclosed in D5.

2.17 As a consequence, the objective technical problem remains as set out in point 2.9 above.

2.18 As already mentioned (see point 2.7 above), the assumption underlying the following analysis is, in the appellant's favour, that the solution to this technical

problem is provided by the composition as defined in the current claim 1.

Obviousness of the solution

2.19 Like the composition according to the current claim 1, diet composition S2 of D5 is a nutritional composition containing protein, lipids, carbohydrates, vitamins and minerals.

2.20 The rodent model of D5 is intended to be a model for the treatment of human subjects. As mentioned earlier (see point 2.8 above), the person skilled in the art would understand D5 as also being relevant to the treatment of elderly subjects, as recited in the current claim 1.

2.21 It would have been obvious to the person skilled in the art aiming to provide an alternative composition suitable for elderly (human) subjects to include components recommended for inclusion in foods.

2.22 According to the teaching of the patent in suit, cysteine is provided by a protein source (see paragraphs [0063] to [0067]). As acknowledged in the patent (see paragraph [0064]), all proteins that are typically used in food manufacture provide cysteine. Thus, starting from diet S2 in D5, which includes protein, the skilled person would not have required inventive skill to use a typical food protein containing cysteine.

2.23 Document D7 is a document produced by the Scientific Committee for Food of the European Commission and can be considered to represent common general knowledge. Annex 1 lists on page 39 suggested acceptable ranges and limit values for vitamins, minerals and trace elements in nutritionally complete foods for special

medical purposes for adults. These include recommendations for manganese and molybdenum.

2.24 Furthermore, nothing in the prior art indicates that cysteine, manganese and molybdenum should not be included.

2.25 On this basis, it has to be concluded that the inclusion of cysteine, manganese and molybdenum would have been obvious to the person skilled in the art starting from D5 and seeking to provide an alternative composition suitable for improving cognitive function.

2.26 As a consequence, the subject-matter of claim 1 of the main request does not involve an inventive step within the meaning of Article 56 EPC.

3. Inventive step - auxiliary request 1 (Articles 100(a), 52(1) and 56 EPC)

3.1 The assessment of inventive step set out in section 2. above with regard to claim 1 of the main request applies in the same way to claim 1 of auxiliary request 1.

3.2 While it was in dispute among the parties whether or not the definition of claim 1 of auxiliary request 1 was clear with regard to the presence and possible amounts of taurine, this issue does not affect the board's reasoning presented above.

3.3 For these reasons, the subject-matter of claim 1 of auxiliary request 1 does not involve an inventive step within the meaning of Article 56 EPC either.

4. Requests for non-admittance of certain assertions or arguments (see point XV. above)

4.1 None of the respondent's assertions mentioned by the appellant in its letter of 1 August 2025 is of relevance to the board's reasoning on inventive step as set out above. Hence, a decision on the admittance of these assertions was not required.

4.2 The arguments provided by the appellant on pages 13 to 15 of its statement setting out the grounds of appeal set out the reasons why it believed the decision under appeal was flawed. These were taken into account by the board. In view of the fact that the appeal was dismissed, further reasoning on the issue of their admittance is not required.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairwoman:

I. Aperribay M. Pregetter

Decision electronically authenticated