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Datasheet for the decision of 13 January 2026

Case Number: T 0406/24 - 3.3.07

Application Number: 15719484.6

Publication Number: 3139904

IPC: A61K9/16, A61K9/20, A61K9/50, A61K31/122, A61K33/06, A61K33/14, A61K33/24, A23L33/15, A23L33/16, A23L5/00, A23L7/00, A23L9/00, A23L21/00

Language of the proceedings: EN

Title of invention:
FORMULATION OF FAT-SOLUBLE VITAMIN

Patent Proprietor:
BASF SE

Opponent:
DSM NUTRITIONAL PRODUCTS AG

Headword:
Fat-soluble vitamin/BASF

Relevant legal provisions:
EPC R. 99(1)
EPC Art. 54, 56, 111(1)
RPBA 2020 Art. 12(4), 12(6), 12(2), 13(2)

Keyword:

Admissibility of appeal - notice of appeal - identity of the appellant - notice of appeal - indication of the impugned decision
Novelty - main request (no)
Inventive step - auxiliary requests 1-4 (no) - auxiliary request 5 (yes)
Late-filed evidence - should have been submitted in first-instance proceedings (yes)
Late-filed objection - circumstances of appeal case justify admittance (yes)
Amendment after issue of the communication pursuant to Article 15(1) RPBA - exceptional circumstances (no)
Appeal decision - remittal to the department of first-instance (no)

Decisions cited:

G 0001/12

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Beschwerdekammern

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Case Number: T 0406/24 - 3.3.07

D E C I S I O N
of Technical Board of Appeal 3.3.07
of 13 January 2026

Appellant: (Opponent)	DSM NUTRITIONAL PRODUCTS AG Wurmisweg 576 4303 Kaiseraugst (CH)
Representative:	Kraus & Lederer PartGmbB Thomas-Wimmer-Ring 15 80539 München (DE)
Respondent: (Patent Proprietor)	BASF SE Carl-Bosch-Strasse 38 67056 Ludwigshafen am Rhein (DE)
Representative:	Dehns 10 Old Bailey London EC4M 7NG (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 15 January 2024 rejecting the opposition filed against European patent No. 3139904 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	A. Usuelli
Members:	M. Steendijk
	L. Basterreix

Summary of Facts and Submissions

I. European patent 3 139 904 ("the patent") was granted on the basis of fourteen claims.

Claim 1 as granted defines:

"A composition comprising
A) microcapsules comprising at least one fat-soluble active substance selected from vitamin K1, vitamin K2 and provitamins and prodrugs of vitamin K1 or vitamin K2, such as MK-6, MK-7 or MK-8 or a mixture thereof embedded in a matrix comprising a hydrocolloid and optionally one or more other matrix components, and
B) at least one dietary mineral."

II. The patent was opposed on the grounds that its subject-matter lacked novelty and inventive step and that the claimed invention was not sufficiently disclosed.

The opposition division decided to reject the opposition.

The opposition division cited *inter alia* the following documents:

D1: EP-A 1 410 721 A1
D2: Product information "Dry Vitamin K1 5% SD", F. Hoffmann-La Roche Ltd., "Date: 30 May 2001" (D2a) + Product information "Dry Vitamin K1 5% SD", F. Hoffmann-La Roche Ltd., "Date: 30 September 1987" (D2b)
D3: Product data sheet "Dry Vitamin K1 5% SD", DSM Nutritional Products, 3 March 2006

D4: Data sheet "Dry Vitamin K1 1 % GFP", BASF, May 2005
D5: Data sheet "Dry Vitamin K1 5 % GFP", BASF, May 2005
D6: WO 2005/056023 A1
D7: WO 2007/042153 A1
D10: EP 1 106 174 A1
D12: WO 2011/152810 A1
D14: EP 0 835 613 A2
D16: Press-Release PHARMABIZ.com, "Kappa Bioscience launches new double-coated, microencapsulated Vitamin K2 as MK-7", 5 November 2013
D17: EP 1 153 548 A1
D20: Press-release NUTRAingredients.com, "Kappa debuts double-coated vitamin K2", 4 November 2023
D21: WO 2009/095240 A1

The opposition division arrived at the following conclusions:

(a) Claim 1 of the patent as granted defined a composition containing microcapsules comprising vitamin K1 or vitamin K2 or related agents embedded in a matrix comprising a hydrocolloid and the at least one dietary mineral as separate components.

(b) The patent sufficiently disclosed the invention as defined in the claims as granted.

(c) The subject-matter of claim 1 as granted was new over the cited prior art, including documents D4 and D5.

Documents D4 and D5 described microcapsules comprising vitamin K1 in a hydrocolloid matrix in combination with a dietary mineral. Documents D4 and D5 did not disclose a composition in which the

microcapsules and the dietary mineral are separate components of the composition.

(d) Document D16 described the stabilisation of vitamin K2 in products which include calcium and other minerals when the vitamin K2 is encapsulated in microcapsules. Document D16 presented an enabling disclosure having regard to the common general knowledge concerning the preparation of microcapsules and the coating thereof.

The subject-matter of claim 1 as granted differed from the teaching of document D16 in that the defined microcapsules comprised the vitamin K embedded in a matrix comprising a hydrocolloid and that the composition contained at least one dietary mineral.

In view of the relative stability of the microencapsulated vitamin K reported in Table 3 of the patent the objective technical problem concerned the provision of a stable composition comprising vitamin K1 or K2 and a dietary material.

The solution according to claim 1 as granted was not obvious in view of the prior art. Document D21 merely disclosed a blend of components without any suggestion to separate microcapsules embedding vitamin K2. Document D13 focussed on liposomal compositions and did also not provide any suggestion towards the microcapsules as defined in claim 1 as granted.

III. The opponent filed on 15 March 2024 a notice of appeal against the decision of the opposition division. In reply to an invitation pursuant to Rule 101(2) EPC to

remedy a deficiency in the notice of appeal, the appellant-opponent stated its name and address.

In the statement setting out the grounds of appeal of 15 May 2024, the opponent maintained that the subject-matter of the patent was not new and lacked an inventive step.

The opponent cited the following additional documents in the statement of grounds of appeal:

A28: Kappa Bioscience's brochure dated 2021;
A29: Roche Vitamins' product data sheet "Dry Vitamin K1 5% SD" dated 1999;
A30: Declaration of Mr Christian Schäfer dated 13.05.2024;
A31: Printout of Wikipedia – "Anticaking agent" – 10 December 2013.

IV. Third party observations were filed on 14 May 2024 in the name of Magnesia GmbH.

The following additional documents were submitted with these observations:

TP28: Proc Nutricion Society (2001), 60, 475-479
TP29: CN101422446A
TP29a: English translation of CN101422446A
TP30: US 2011/0014288 A1
TP31: WO 2008/077402 A1.

V. In its reply to the appeal of 23 September 2024, the respondent-patent proprietor contested the admissibility of the appeal. Should the Board consider the appeal admissible, the patent proprietor argued that the appeal should be dismissed. It further

submitted that the documents cited for the first time in the appeal proceedings, as well as new arguments raised in the statement of grounds of appeal or in the third-party observations, including an inventive step attack based on documents D4 or D5, should not be admitted. Together with its reply, the patent proprietor filed auxiliary requests 1–19. Auxiliary auxiliary requests 1–5 are relevant to this decision and correspond to auxiliary requests 1-5 as filed during the proceedings before the opposition division on 9 August 2023.

Auxiliary request 1 includes separate independent claims 1 and 2.

- Claim 1 of auxiliary request 1 relates to a composition as defined in granted claim 1, except for the amendment that the at least one active substance is selected from vitamin K2 and provitamins and prodrugs of vitamin K2, such as MK-6, MK-7 or MK-8 or a mixture thereof (deletion of references to vitamin K1).

- Claim 2 of auxiliary request 1 relates to a composition as defined in granted claim 1, except for the amendments that the at least one active substance is selected from vitamin K1 and provitamins and prodrugs of vitamin K1 (deletion of references to vitamin K2) and that the hydrocolloid makes up 15 to 80 wt% of the microcapsule.

Claim 1 of **auxiliary request 2** corresponds to granted claim 1, except for the additional feature that the hydrocolloid makes up 15 to 80 wt% of the microcapsules.

Claim 1 of **auxiliary request 3** corresponds to granted claim 1, except for the additional feature that the hydrocolloid makes up 20 to 70 wt% of the microcapsules.

Claim 1 of **auxiliary request 4** relates to a composition as defined in granted claim 1, except that it separately defines the alternatives of a composition wherein the at least one active substance is selected from vitamin K2 and provitamins and prodrugs of vitamin K2 or a mixture thereof and a composition wherein the at least one active substance is selected from vitamin K1 and provitamins and prodrugs of vitamin K1. In the case of the compositions comprising a vitamin K1 agent, the content of the active substance is from 0.5 to 3%, of the total weight of the microcapsules.

Claim 1 of **auxiliary request 5** corresponds to claim 1 of auxiliary request 1. It defines:

"A composition comprising
A) microcapsules comprising at least one fat-soluble active substance selected from vitamin K2 and provitamins and prodrugs of vitamin K2, such as MK-6, MK-7 or MK-8 or a mixture thereof embedded in a matrix comprising a hydrocolloid and optionally one or more other matrix components, and
B) at least one dietary mineral."

The remaining claims of auxiliary request 5 are drafted as dependent claims referring back to claim 1.

VI. In its submission of 13 December 2024, the opponent addressed the issue of the admissibility of the appeal, the admittance of documents A28-A31, and the admittance and relevance of the arguments in the statement of

grounds of appeal. The opponent further denied that the auxiliary requests complied with the requirement of inventive step relying *inter alia* on documents D4 or D5 as closest prior art in combination with document D14.

VII. In its communication pursuant to Article 15(1) RPBA of 18 July 2025, the Board indicated its preliminary view that:

- documents A28-A30 and TP28-TP31 were not to be admitted into the appeal proceedings,

- the subject-matter of claim 1 as granted seemed to lack novelty and inventive step in view of documents D4 and D5, which described products comprising vitamin K1,

- the subject-matter of claim 1 as granted did not appear to be obvious starting from document D16, which related to products comprising vitamin K2,

- auxiliary request 1-4 did not seem to comply with the requirement of inventive step in view of documents D4 or D5 as closest prior art,

- no special reasons seem to justify the remittal of the case to the opposition division.

VIII. In its submission of 19 September 2025 the patent proprietor denied that documents D4 and D5 anticipated the subject-matter of granted claim 1 and maintained its objection that an inventive step attack based on documents D4 or D5 should not be admitted. With this submission, the patent proprietor filed auxiliary requests 1a and 3a and further arguments to address such an attack.

Auxiliary request 1a comprises, like auxiliary request 1, two separate independent claims. It differs from auxiliary request 1 in that claim 2 of auxiliary request 1a defines a composition as in granted claim 1 wherein the at least one active substance is selected from vitamin K1 and provitamins and prodrugs of vitamin K1 and specifies that the content of the at least one dietary mineral is at least 10% of the composition while omitting the requirement that the hydrocolloid makes up 15 to 80 wt% of the microcapsule.

Claim 1 of **auxiliary request 3a** corresponds to claim 1 of auxiliary request 3, except for the additional feature that the content of the at least on dietary mineral is at least 10% of the composition.

IX. In its submission of 2 December 2025, the opponent objected to auxiliary requests 1a and 3a as late-filed and supported its objections of lack of novelty and lack of inventive step in view of the prior art with the additional reference to document TP28 as evidence of the common general knowledge.

X. In its submission of 18 December 2025, the patent proprietor objected to the opponent’s late-filed argument based on document TP28. The patent proprietor maintained that the opponent should not be allowed to rely on documents D4 or D5 for its inventive step attack and argued that auxiliary requests 1a and 3a represented a justified response to such attack.

XI. Oral proceedings were held on 13 January 2026. During the oral proceedings, the opponent referred in its arguments of lack of inventive step to the mention of a blend in document D20. The patent proprietor objected

to the admittance of the argument based on the mention of a blend in document D20 as late-filed. The patent proprietor withdrew its objection to the admittance of document A31.

XII. The arguments of the appellant-opponent relevant to the present decision are summarized as follows:

(a) Admissibility of the appeal

The notice of appeal, including the accompanying form EP1038OPPO OLF2.0, adequately identified the opponent, DSM Nutritional Products AG, as the represented party. The reply to the invitation pursuant to Rule 101(2) EPC to remedy a deficiency in the notice of appeal confirmed the appellant's name and provided its address. The notice of appeal furthermore identified the decision impugned by the number of the patent concerned and the date on which opposition division orally announced its decision to reject the opposition of the identified patent. The notice of appeal therefore complied with Rule 99(1)(a),(b) EPC and the appeal was thus admissible.

(b) Admittance of new evidence

Document A28

Document A28 was highly relevant to the outcome of the appeal, because it demonstrated that the definition of the microcapsules in claim 1 as granted did not distinguish the claimed subject-matter from the product K2VITAL Delta described in document D16. The filing of document A28 with the statement of grounds of appeal was justified,

because the opposition division diverged in its decision from its preliminary opinion that the skilled person would know how to prepare the product of document D16 and that the only difference of the subject-matter of claim 1 with document D16 was the addition of a dietary mineral.

Document A31

Document A31 represented common general knowledge concerning anti-caking agents. It demonstrated that, contrary to the finding in the decision under appeal, the anti-caking agent as referred to in documents D4/D5 was a product component separate from the described powder particles comprising vitamin K1.

Document TP28

Document TP28 confirmed that the microencapsulation of vitamins, including vitamin K, was part of the common general knowledge and was typically achieved by spray-drying using matrix materials such as gum arabic. Document TP28 was relevant to the outcome of the appeal, because it supported the argument that the skilled person could reproduce the teaching of document D16 on the basis of the common general knowledge.

(c) Main request - Novelty of claim 1 as granted

Documents D4 and D5 already described a composition containing powder particles of droplets of vitamin K1 oil embedded in a matrix of gum arabic and spray-dried glucose syrup product and tricalcium phosphate as an anti-caking agent. The skilled

person understood on the basis of the common general knowledge that such an anti-caking agent is used as a separate additive. Accordingly, documents D4 and D5 anticipated the composition as defined in claim 1 as granted.

(d) Auxiliary request 1 - Inventive step of claim 1

Claim 1 of auxiliary request 1 lacked an inventive step in view of document D16 as closest prior art. Document D16 disclosed that the product K2VITAL Delta provides stability of vitamin K2 (MK-7) in consumer products in which calcium and other minerals are present by protecting the vitamin through microencapsulation technology. It was evident from document D16 that such products contained the microcapsules and the dietary minerals as separate components. This understanding was confirmed by document D20, which referred to the stability in blends of the same K2VITAL Delta product. Document D20 had been cited in the statement of grounds of appeal as an alternative, suitable starting point in the prior art. It was common knowledge that fat-soluble vitamins such as vitamin K2 may be conveniently formulated with a matrix material such as gum arabic in the form of spray-dried microcapsules. With the reference to K2VITAL Delta as double coated, microencapsulated vitamin K2, document D16 therefore provided an enabling teaching. Whilst document A28 demonstrated that, like the microcapsules in the claim, the microcapsules in K2VITAL Delta actually comprised a hydrocolloid (gum arabic), the only possible distinguishing feature of the claimed subject-matter with respect to the teaching of D16 concerned the choice of the matrix material for the

microcapsules. In view of the experimental results reported in Tables 3-4 of the patent the relevance of this choice was questionable. As solution to the problem of providing an alternative composition in which the vitamin K2 is protected against degradation due to the presence of a dietary mineral, the choice of a hydrocolloid as matrix material was in any case obvious, because hydrocolloids were known as suitable matrix material in microcapsules for protecting vitamins, including vitamin K, as evidenced by documents D10 and D14. Insofar as the feature of the dietary mineral could be considered to distinguish the claimed subject-matter from the disclosure in document D16, this feature was obvious, because it was as at least already suggested in document D16 and because documents D1, D6, D7, D12, D17 and D21 already described the combination of vitamin K and dietary minerals as external components.

(e) Auxiliary request 1 - Inventive step of claim 2

Claim 2 of auxiliary request 1 lacked an inventive step in view of any of documents D4 and D5 as closest prior art. Documents D4 and D5 reported that the described products, comprising vitamin K1 containing particles together with tricalcium phosphate as an anti-caking agent, were stable and suitable for use in mineral preparations. The only distinguishing feature of the claimed subject-matter with the teaching of documents D4 and D5 concerned the specification that the hydrocolloid makes up 15 to 80 wt% of the microcapsule. No unexpected effect relating to this feature had been substantiated. Faced with the problem of preparing an alternative to the compositions of document D4

or D5, the skilled person would arrive at the hydrocolloid content defined in the claim through routine experimentation, especially since document D14 indicated that such levels of hydrocolloid were suitable for the preparation of microencapsulated vitamins.

An objection of lack of inventive step starting from document D4 or D5 was raised in the notice of opposition and had not been withdrawn during the proceedings before the opposition division. The admittance of the objection based on documents D4 and D5 into the appeal proceedings was in any case justified by the circumstances of the appeal case.

(f) Auxiliary requests 1a and 3a - Admittance

No exceptional circumstances justified the admittance of the late-filed auxiliary requests 1a and 3a.

(g) Auxiliary requests 2-5

Auxiliary requests 2-4 did not define any additionally distinguishing feature with respect to claim 2 of auxiliary request 1 that was suitable to support an inventive step.

The arguments against an inventive step of the subject-matter of claim 1 of auxiliary request 1 also applied to the subject-matter claimed in auxiliary request 5.

XIII. The arguments of the respondent-patent proprietor relevant to the present decision are summarized as follows:

(a) Admissibility of the appeal

The notice of appeal indicated "DSM Intellectual Property" as the appellant and did not allow for the identification of the opponent "DSM Nutritional Products AG" as the true appellant. The notice of appeal furthermore failed to correctly indicate the decision impugned by reference to the decision at oral proceedings of 10 October 2023 instead of the final decision dated 15 January 2024. In accordance with the considerations in G 1/12 (reasons 26), the notice of appeal did not comply with Rule 99(1)(a), (b) EPC. The appeal was therefore not admissible.

(b) Admittance of new evidence

Document A28

The objection that document D16 did not disclose the constitution of the product K2VITAL Delta had been raised in the response to the opposition opposition procedure and maintained in reaction to the opposition division's preliminary opinion. The late filing of document A28 with the statement of grounds of appeal was therefore not excused by any deviation from the preliminary opinion in the decision under appeal. Moreover, document A28 could not be considered to demonstrate the constitution of the product of document D16, which was published 8 years before document A28.

The admittance of documents TP28-TP31 filed by a third party during the appeal proceedings was not foreseen under Article 12 RPBA. Moreover, the third-party's documents TP28-TP31 lacked additional pertinence. No exceptional circumstances justified the opponent's reliance on document TP28 only after the Board's communication pursuant to Article 15(1) RPBA.

(c) Main request - Novelty of claim 1 as granted

Documents D4 and D5 related to product information from BASF on two vitamin K1 compositions described as light yellow powders consisting of almost spherical particles or agglomerates, wherein the powder particles contain the vitamin K1 in a matrix of gum arabic and spray-dried glucose syrup and tricalcium phosphate as an anti-caking agent. It could not be directly and unambiguously derived from these documents that the tricalcium phosphate used as an anti-caking agent was present in the described compositions as a separate component. The description as light yellow powder consisting of the particles suggested the contrary. The patent itself explained that microcapsules may well contain an anti-caking agent as an additive. Moreover, when only used as an anti-caking agent, the presence of tricalcium phosphate as described in documents D4 and D5 did not anticipate the feature of the dietary mineral as defined in claim 1 as granted, which required substantially higher amounts of tricalcium phosphate than its use as an anti-caking agent. The composition as defined in claim 1 as granted was therefore new in view of documents D4 and D5.

(d) Auxiliary request 1 - Inventive step of claim 1

The experimental results in the patent demonstrated the advantage of formulating vitamin K compounds in microcapsules separately from dietary minerals. Document D16 did not constitute an enabling disclosure, because it neither described the composition of the double-coated microencapsulated vitamin K2 identified as K2VITAL Delta nor the composition of the finished consumer products containing calcium formulated with K2VITAL Delta. No exceptional circumstances justified the opponent's late reliance on the mention of blends in document D20, which in any case did not further support the argument that the reported consumer products contained K2VITAL Delta and dietary minerals as separate components. The differences between the claimed composition and the description of products in document D16 concerned the constitution of the microcapsules and the separate presence of the dietary mineral. The objective technical problem was the provision of an improved composition with high overall stability and good storage properties for the delivery of dietary minerals and vitamin K compounds. Document D16 did not disclose the conditions under which dietary minerals contribute to the degradation of vitamin K, nor did it indicate that formulating microencapsulated vitamin K in a hydrocolloid matrix, separately from dietary minerals, would prevent such a degrading effect. The opponent could in the appeal proceedings not rely on a new argument based on the combination of the teaching of document D16 with the information in documents D10 or D14. The skilled person would in any case not combine document D16 with documents D10 or D14,

which did not address the degradation of vitamin K in the presence of dietary minerals. The objection that the claimed subject-matter was obvious in view of documents D1, D6, D7, D10, D12, D17 and D21 was not substantiated by any adequate argument.

(e) Auxiliary request 1 - Inventive step of claim 2

An objection of lack of inventive step starting from documents D4 or D5, which had only been mentioned but not further developed in the notice of opposition, had not been pursued further during the proceedings before the opposition division. The fact that the appealed decision did not expressly address the subject-matter of claim 2 of auxiliary request 1 did not justify introducing a new objection based on D4 or D5, since the subject-matter of claim 2 of auxiliary request 1 was already encompassed by granted claim 1.

The admittance of such an objection resulted in a fresh case, which justified the remittal of the case to the opposition division.

As shown in document D2, commercially available spray-dried powders containing vitamin K1 comprised 90 wt% of a viscous hydrocolloid (acacia gum). The lower hydrocolloid content defined in claim 2 of auxiliary request 1 facilitated the spray-drying process, resulted in a cheaper product and possibly provided faster release and improved sensory properties, while still yielding microcapsules suitable to protect vitamin K against degradation associated with the presence of a dietary mineral. No prior art suggested these effects of a reduced content of the hydrocolloid. Starting from document

D4 or D5, the skilled person had no reason to consult document D14, which related to multivitamin formulations and provided the skilled person no suggestion towards a hydrocolloid content of 15 to 80 wt% in vitamin K1 particles as described in documents D4 and D5.

(f) Auxiliary requests 1a and 3a - Admittance

Auxiliary requests 1a and 3a further distinguished the claimed subject-matter by requiring that the content of the at least one dietary mineral is at least 10 wt% as defined in dependent claim 6 of the patent as granted. The appeal confronted the patent proprietor with the exceptional situation of a multitude of new attacks. The filing of auxiliary requests 1a and 3a was therefore a justified response to the new objection of lack of inventive step based on documents D4 and D5 as addressed in the Board's communication pursuant to Article 15(1) RPBA.

(g) Auxiliary requests 2-5

The arguments supporting an inventive step for claims 1 and 2 of auxiliary request 1 also applied to the subject-matter claimed in auxiliary requests 2-5.

XIV. The appellant-opponent requested that the decision under appeal be set aside and that the patent be revoked.

The opponent further requested, in as far as relevant to the present decision, that documents A28, A31 and TP28 and any new arguments presented in its statement

of grounds of appeal be admitted into the appeal proceedings and that auxiliary requests 1a and 3a not be admitted.

XV. The respondent-patent proprietor requested that the appeal be held inadmissible or else that the appeal be dismissed and the patent be maintained as granted.

As auxiliary measure, the patent proprietor requested, in as far as relevant to the decision, that the patent be maintained based on one of auxiliary requests 1-5 as filed with its reply to the grounds of appeal or auxiliary requests 1a or 3a as filed on 19 September 2025.

The patent proprietor further requested that documents A28-A30 and documents TP28-TP31 as well as new arguments based on these documents not be admitted into the appeal proceedings or else the case be remitted to the opposition division.

The patent proprietor also requested that the opponent's new arguments of lack of inventive step based on

- document D16 in combination with documents D10 or D14,
- the reference to a blend in document D20,
- the public availability of the product K2VITAL Delta,
- documents D4 or D5 as closest prior art

not be admitted into the appeal proceedings.

The patent proprietor requested that the case be remitted to the opposition division if such new arguments were admitted into the proceedings.

Reasons for the Decision

1. Admissibility of the appeal

The letter accompanying the notice of appeal (form EP1038) is considered to form part of the opponent's notice of appeal. This letter explicitly states that the opponent, DSM Nutritional Products AG, is the represented party. In line with the considerations in G 1/12 (reasons 26), the notice of appeal thereby adequately identified the appellant. The reply to the invitation pursuant to Rule 101(2) EPC to remedy a deficiency in the notice of appeal confirmed the appellant's name and provided the appellant's address.

The notice of appeal also clearly identified the decision of the opposition division against which the appeal was filed by the reference to the publication number EP3139904 and the date of the announcement of the decision at the oral proceedings of 10 October 2023. Notably, the notification of 15 January 2024 stating the grounds for the decision, which the proprietor considers the "final decision", explicitly refers to the opposition division's decision at the oral proceedings of 10 October 2023 rejecting the opposition against the European patent EP-B-3139904, as also identified in the notice of appeal.

The Board therefore concludes that the notice of appeal complies with Rule 99(1) EPC and that the appeal is therefore admissible.

2. Admittance of new evidence and the third-party's observations

2.1 Document A28

Document A28 is a brochure from 2021 from Kappa Bioscience, which states that a product with the name K2VITAL Delta, which is also mentioned in document D16, was launched in 2012 (see A28, page 7). This brochure describes K2VITAL Delta as containing MK-7 in a spray-dried double coated encapsulation comprising sucrose, corn starch, gum arabic and medium chain triglyceride oil (see A28, pages 35-36).

Document A28 was first filed by the opponent with the statement of grounds of appeal as evidence of the constitution of the product K2VITAL Delta mentioned in document D16. The objection that document D16 does not reveal the constitution of the product K2VITAL Delta had already been raised in patent proprietor's response to the opposition (see sections 123-124) and was maintained in its submissions of 9 August 2023 (see section 83) in response to the preliminary opinion of the opposition division. The document should therefore have been filed during the proceedings before the opposition division, regardless of any divergence between the decision under appeal and the division’s preliminary opinion. Moreover, the admission of document A28 would raise the question of whether it provides convincing evidence with regard to the composition of the product K2VITAL Delta as referenced eight years earlier in document D16.

The Board did therefore decide not to admit document A28 under Article 12(4) and (6) RPBA.

2.2 Document A31

Document A31 represents a Wikipedia item from 10 December 2013 relating to the term "anti-caking agent". It confirms that an anti-caking agent is an additive placed in powdered or granulated materials to prevent the formation of lumps, which functions either by absorbing excess moisture, or by coating particles and making them water repellent.

This common general knowledge was not contested by the patent proprietor. It is evidently relevant in the assessment of the finding in the decision under appeal regarding the constitution of the products described in documents D4 and D5 comprising tricalcium phosphate as an anti-caking agent. The Board therefore admitted document A31 into the appeal proceedings under Article 12(4) RPBA.

2.3 Documents TP28-TP31 and the third-party's observations

2.3.1 Documents TP28-TP31 were filed as part of observations by a third party during the appeal proceedings at an early stage of the appeal proceedings, namely before expiry of the time limit for filing the statement of grounds of appeal. Whilst the admittance of observations by a third party during the appeal proceedings is not foreseen under Article 12 RPBA, it is established jurisprudence that the Board has discretion regarding the admittance of third-party's observations. However, Article 115 EPC cannot serve to extend a third party's rights beyond the rights of parties to the proceedings (see Case law of the Boards of Appeal of the EPO, 11th edition, 2025, section III.N.4.4). Accordingly, the provisions of Article 12(2), (4) and (6) apply analogously to the admittance

of the third-party's observations and of documents TP28-TP31 cited therein.

2.3.2 In the third-party's observations it is contested that the subject-matter of claim 1 as granted involves an inventive step starting from document D16 as closest prior art. The only difference between the claimed subject-matter and the teaching of document D16 concerned the nature of the matrix material for encapsulating vitamin K. The objective technical problem was the provision of an alternative composition comprising vitamin K2 which is stable when formulated with a dietary mineral. The choice of a hydrocolloid as the matrix formulation was obvious in view of the common general knowledge represented in document TP28 or the information in documents D14, TP29, TP30 or TP31, which all disclosed hydrocolloids as described in paragraph [0051] of the patent as suitable matrix material for providing protective microencapsulation of vitamin K. Similar observations applied against the subject-matter of the auxiliary requests.

Notably, the third party’s observations provide no justification for their late filing. In addition, they do not appear to address the finding in the decision under appeal concerning the formulation of the microcapsules and the dietary mineral as separate components. Furthermore, the assertion that the hydrocolloids mentioned in paragraph [0051] of the patent were known as suitable matrix materials for protective microencapsulation of vitamin K, whether in view of the common general knowledge from document TP28 or otherwise in view of documents D14 or TP29–TP31, does not seem to introduce any new aspect beyond the arguments already advanced by the opponent during the first-instance proceedings.

The Board therefore decided not to admit the third-party's observations nor any of documents TP28-TP31 cited therein.

2.3.3 Following the Board's communication pursuant to Article 15(1) RPBA, the opponent relied for the first time on document TP28 as supporting its argument that the skilled person could reproduce the teaching of document D16 on the basis of the common general knowledge. No exceptional circumstances justified this late amendment to the opponent's appeal case.

The Board therefore decided not to admit the opponent's arguments relying on document TP28.

3. Main request - Novelty of claim 1 as granted

3.1 According to the decision under appeal, claim 1 defines a composition comprising the defined microcapsules and the dietary mineral as separate components. The Board agrees with this finding, which has not been challenged during the appeal proceedings.

3.2 Documents D4 and D5 are product data sheets from BASF for "Dry Vitamin K1 1% GFP" (D4) and "Dry Vitamin K1 5% GFP" (D5), which describe free-flowing powders consisting of almost spherical particles or agglomerates, wherein the powder particles contain vitamin K1 oil dissolved in droplets which are embedded in a matrix of gum arabic and spray-dried glucose syrup. Both documents state that the products contain tricalcium phosphate as an anti-caking agent.

It was not in dispute that the particles with the vitamin K1 embedded in a matrix as described in

documents D4 and D5 correspond to microcapsules as defined in claim 1 as granted. The parties disagreed whether documents D4 and D5 described tricalcium phosphate as a separate component and whether tricalcium phosphate would, when used as an anti-caking agent, qualify as a dietary mineral as defined in claim 1 as granted.

3.3 Documents D4 and D5 refer under the heading "Description" to a powder consisting of particles and agglomerates and state under the heading "Composition" that the powder particles contain the vitamin K1 and that the product contains calcium triphosphate as an anti-caking agent. As evidenced by document A31, it was common general knowledge that an anti-caking agent is an additive placed in powdered or granulated materials to prevent the formation of lumps, which functions either by absorbing excess moisture, or by coating particles and making them water repellent. In view of this common general knowledge the Board considers that it is unreasonable for a skilled person to conclude that a hygroscopic agent such as tricalcium phosphate, which is used in the powdered products of documents D4 and D5 as anti-caking agent, could be part of the powder particles which it is intended to prevent to agglomerate.

This assessment is not affected by the description in documents D4 and D5 of the powder as consisting of particles and agglomerates or as being light yellow in colour, because both documents subsequently provide an explicit specification of the composition of the powder particles and of the product containing tricalcium phosphate as an anti-caking agent. The statement in paragraph [0053] of the patent that an anti-caking agent may be included in microcapsules as an additive

is consistent with the teaching of document A31, which explains that an anti-caking agent may act by rendering particles water-repellent. This mechanism, however, does not apply to tricalcium phosphate, which is hygroscopic.

3.4 The patent explains in paragraphs [0039]-[0040] that the at least one dietary mineral is preferably a calcium or magnesium salt, in particular a pharmaceutically acceptable salt thereof. Tricalcium phosphate, which is mentioned as an anti-caking agent in the product of documents D4 and D5, thus clearly represents a dietary mineral within the meaning of the patent. Notably, claim 1 defines the composition by its constituent components without reference to the intended use of the composition and without otherwise specifying the amounts of the dietary mineral.

3.5 The Board therefore concludes that the subject-matter of claim 1 as granted lacks novelty in view of documents D4 and D5.

Accordingly, the patent as granted does not comply with Article 54 EPC

4. Auxiliary request 1 - Inventive step of claim 1

4.1 Closest prior art

4.1.1 Claim 1 of auxiliary request 1 is limited to a composition comprising a vitamin K2 compound as the at least one fat-soluble active substance.

The patent addresses the problem of degradation of vitamin K compounds in the presence of dietary minerals, such as calcium and magnesium salts (see

paragraph [0012]). The experimental results reported in Tables 2-4 of the patent demonstrate that in compositions comprising vitamin K2 (MK-7) in acacia gum based microcapsules and a dietary mineral as separate components the vitamin K2 is protected from degradation by the presence of the dietary mineral. The Board notes that, although the results in Tables 3 and 4 of the patent show in the comparative tablets with unprotected vitamin K2 comprising CaCO3 after the first three months of stability testing a higher absolute vitamin K2 content, these tablets still exhibit a greater decline in vitamin K2 relative to the initial level than the tablets in which vitamin K2 is formulated in microcapsules separate from the dietary mineral.

4.1.2 Document D16, which was relied on by the opponent as the closest prior art with respect to the composition comprising microencapsulated vitamin K2 as defined in claim 1 of auxiliary request 1, is a press release relating to the launch of a new product, K2VITAL Delta. It describes this product as "***double-coated, microencapsulated vitamin K2 as MK-7, the first and only in the market***", which following the lead from encapsulation technologies used in manufacturing of other fat-soluble vitamins "***delivers unsurpassed stability in calcium and other mineral formulations***" (see D16, paragraph 1).

Document D16 reports that testing of over 100 samples had revealed low recovery of vitamin K2 MK-7 and decreased stability in finished products containing calcium and other minerals (see D16, paragraph 2). It further states that trials with K2VITAL Delta had proven that "***K2VITAL Delta has a unique, stable recovery rate of MK-7 well above 95% in finished***

consumer products where calcium and other minerals are present" (see D16, paragraph 3).

Document D16 concludes that K2VITAL Delta "***creates a new ingredient standard for vitamin K2 MK-7 with a microencapsulation technology that protects the vitamin K2 molecule, enabling it to survive processing conditions and increase shelf life stability***", offering manufacturers of calcium and other mineral formulations "***numerous new benefits, such as greater stability resulting in longer shelf life, lower cost in use (due to lower overage), better blending characteristics and flow-ability, and confirmed presence of vitamin K2 in the finished product***" (see D16, paragraph 7).

4.1.3 The Board considers that by the mere description of K2VITAL Delta as double-coated, microencapsulated vitamin K2 document D16 cannot be considered to provide the skilled person with an enabling disclosure to reproduce this specific product. The skilled person may be familiar with technology for the microencapsulation of fat-soluble vitamins. However, the actual specific composition of K2VITAL Delta is not revealed in document D16 and cannot be derived from any common general knowledge. Without this information the skilled person cannot reproduce the specific product K2VITAL Delta as described in document D16.

Since no evidence is available regarding the specific composition of the marketed K2VITAL Delta product, document D16 cannot serve as evidence that microcapsules falling within the scope of claim 1 of auxiliary request 1 were publicly available. Consequently, the question of whether arguments based on the alleged public availability of K2VITAL Delta should be admitted does not need to be addressed,

because in any case they would not be more relevant than the arguments starting from document D16.

However, even without an enabling disclosure of the specific product K2VITAL Delta, document D16 still provides the following meaningful technical information relating to the same problem as addressed in the patent:

- the stability of vitamin K2 is decreased in samples which comprise calcium and other minerals

- a new product comprising double coated, microencapsulated vitamin K2, which follows the lead from encapsulation technologies used in manufacturing of other fat-soluble vitamins, has a high stable recovery rate of vitamin K2 MK-7 in finished consumer products where calcium and other minerals are present

- with the microencapsulation technology protecting the vitamin K2 molecule the new product provides for manufacturers of calcium and other mineral formulations new benefits, including greater stability, lower cost, better blending characteristics, and confirmed presence of vitamin K2 in the finished product.

The Board therefore concludes that, although document D16 does not provide a disclosure which enables the reproduction of the specific product K2VITAL Delta, the identified information in this document may not be dismissed as a suitable starting point in the prior art.

4.2 Objective technical problem

Document D16 does not disclose the specific constitution of the double coated, microencapsulated vitamin K2 composition.

Moreover, whilst document D16 reports that the double coated, microencapsulated vitamin K2 composition provides protection of vitamin K2 under processing conditions allowing for stability in finished products in which calcium and other minerals are present, document D16 does not disclose, neither explicitly nor implicitly, the resulting structure of such finished products, in particular whether the microencapsulated vitamin K2 and dietary minerals are therein present as separate components. Document D16 reports the protection of the vitamin K2 by the microencapsulation technology during processing and storage as well as the recovery and stability of vitamin K2 in finished products containing calcium and other minerals. However, it cannot be concluded therefrom that in such finished products the microcapsules containing the vitamin K2 are necessarily preserved as a component separate from the calcium and other minerals. Likewise, any conclusion from the benefits of improved blending characteristics and flowability offered by the new microencapsulated vitamin K2 product mentioned in document D16 regarding the structure of the finished products remains speculative.

The statement of grounds of appeal suggested in a footnote (see page 14, footnote 14) that a similar reasoning as based on document D16 could be made based on document D20. However, the opponent specifically argued for the first time during the oral proceedings before the Board that the reference in document D20 to

improved stability in blends including calcium offered by the K2VITAL Delta product confirmed that the finished products containing calcium as also described in document D16 comprised the double coated microencapsulated vitamin K2 as a separate component having regard to the wording used in document D20: "blends including calcium". As no exceptional circumstances justified this late amendment to the opponent's appeal case, the Board did not admit this new argument under Article 13(2) RPBA. Notably, the Board does not recognize the prima facie relevance of the reference in document D20 to improved stability offered by the K2VITAL Delta product in blends including calcium, which are otherwise not further characterized, to the mentioned issue of the structure of the finished products.

Taking account of the differences identified between the subject-matter of claim 1 of auxiliary request 1 and the disclosure of document D16 as the closest prior art, as well as the stability of the exemplified compositions reported in the patent, the Board considers that the objective technical problem can be formulated as the provision of a stable composition comprising a vitamin K2 compound and a dietary mineral.

4.3 Assessment of the solution

4.3.1 Document D16 itself does not suggest the solution as defined in claim 1 of auxiliary request 1, because it does not reveal the actual composition of the microcapsules in the product K2VITAL Delta and does not disclose the structure of the finished products containing the calcium and other minerals.

Document D16 highlights the uniqueness of K2VITAL Delta by the qualification as "*first and only in the market*" and the reference to its "*unsurpassed stability*" and "*unique, stable recovery rate of MK-7*". Document D16 mentions that following the lead from encapsulation technologies utilised in manufacturing of other fat-soluble vitamins, K2VITAL Delta offers the same protection. However, in view of the uniqueness of K2VITAL Delta expressed in document D16, the skilled person would, on the basis of the common general knowledge, not expect that any conventional encapsulation technique for fat-soluble vitamins would allow for the stability of vitamin K2 in the presence of a dietary mineral, let alone arrive in an obvious manner at the claimed composition comprising the microcapsules and the dietary mineral as separate components.

4.3.2 The opponent's argument that documents D1, D6, D7, D10, D12, D17 and D21 already suggested the combination of vitamin K and dietary minerals as external components does not address the issue of the constitution of the defined microcapsules comprising vitamin K2, let alone suggest that the combination thereof with a dietary mineral as separate components in a composition avoids the degradation of vitamin K2.

4.3.3 The opposition division summarized its understanding of the opponent's arguments as based on the combination of documents D16/D19/D20/D23 with either one of the documents D10, D11 and D14 in the opposition division's preliminary opinion (see page 12, sections 3.17-3.18). The patent proprietor's objection, that the opponent's arguments based on the combination of document D16 with documents D10 or D14 had not been raised during the proceedings before the opposition division and should

therefore not be admitted into the appeal proceedings, is therefore not considered convincing. These arguments thus form part of the appeal proceedings.

Document D10 describes a powder composition of particles comprising a fat-soluble vitamin dispersed in a matrix comprising a polysaccharide gum (see D10, paragraphs [0011], [0016]). The document mentions vitamin K as an example of such a fat-soluble vitamin and mentions gum arabic as a preferred polysaccharide gum (see D10, paragraph [0036]). Document D10 mentions the utility of the powder composition for the preparation of vitamin and mineral supplemented beverages (see D10, paragraphs [0001]-[0002].

Document D14 describes in Examples 1-6 multivitamin compositions, including vitamin K1, in the form of spray-dried starch coated powders comprising a matrix of a hydrocolloid, such as gum arabic, and sucrose. The document aims to provide stable multivitamin compositions of fat-soluble vitamins (see page 1, lines 3-4 and 26-29).

However, neither document D10 nor document D14 addresses the problem of the degradation of vitamin K2 in the presence of a dietary mineral. Document D10 primarily addresses the problem of preserving the clarity of beverages upon the supplementation with a fat-soluble vitamin (see D10, paragraph [0003]). Document D14 aims at avoiding undesired red colouration or the degradation of vitamin D by interaction of the vitamins (see D14, page 3, lines 2-18). Taking further account of the uniqueness of the K2VITAL Delta expressed in document D16, the skilled person would therefore not expect that the encapsulation techniques for fat-soluble vitamins as described in documents D10

and D14 would allow for the stability of vitamin K2 in the presence of a dietary mineral, let alone arrive in an obvious manner at the claimed composition comprising the microcapsules and the dietary mineral as separate components.

4.4 The Board therefore concludes that the subject-matter of claim 1 of auxiliary request 1 involves an inventive step.

5. Auxiliary request 1 - Inventive step of claim 2

5.1 Closest prior art - Admittance of objection in view of documents D4 and D5 - Respondent's request to remit the case

5.1.1 Claim 2 of auxiliary request 1 is limited to the composition comprising a vitamin K1 compound as the at least one fat-soluble active substance wherein the hydrocolloid makes up 15 to 80 wt% of the microcapsule.

5.1.2 An objection that the subject-matter of the patent as granted lacked an inventive step in view of documents D4 and D5 was raised in the notice of opposition (see page 10, sections II.4 and II.5). The opponent specifically referred to the teaching in documents D4 and D5 that the described microcapsules comprising vitamin K1 are for use in dietary supplements, including mineral preparations. The opponent argued that, if the subject-matter of the patent was considered new over this teaching in documents D4 and D5, it did not involve an inventive step.

The opposition division concluded in its decision that the tricalcium phosphate mentioned in documents D4 and D5 is part of the microcapsules and that documents D4

and D5 did not disclose a dietary mineral separate from the microcapsules as defined in the claims as granted. The decision does not address the objection of lack of inventive step in view of documents D4 and D5. From the minutes of the oral proceedings held before the opposition division, it is not apparent that the opponent had pursued this objection following the opposition division's conclusion that the subject-matter of the patent as granted was new. However, with its appeal, the opponent contested the conclusion in the decision under appeal concerning the novelty of granted claims over document D4 and D5 (see point 4.3 of the statement of grounds of appeal) and submitted that claim 1 as granted was not inventive starting from documents D4 and D5 as alternative closest prior art (see point 5.6 of the statement of grounds of appeal).

The opponent’s appeal case thus provided the basis for developing the objection of lack of inventive step against auxiliary requests 1–4 in its submission of 13 December 2024, relying on the premise that tricalcium phosphate was present as a separate component in the products described in documents D4 and D5. This premise had been rejected in the decision under appeal, and therefore it did not seem relevant to discuss inventive step on the basis of documents D4 and D5 during the oral proceedings before the opposition division. However, the Board overturned the contested decision on this point and considered that documents D4 and D5 disclose tricalcium phosphate as separate component of the described products and that the subject-matter of granted claim 1 lacks novelty in view of documents D4 and D5. Claim 2 of auxiliary request 1 has been limited to overcome the lack of novelty objection over documents D4 and D5 against granted claim 1, which now makes it relevant to discuss

inventive step starting from the same documents. The Board therefore considers that the circumstances of the appeal justify admitting the objection of lack of inventive step based on documents D4 and D5 as the closest prior art. Accordingly, the Board admitted this objection under Article 12(6) RPBA.

5.1.3 The patent proprietor argued that remittal of the case to the opposition division was justified, because the objection of lack of inventive step based on documents D4 and D5 had not been addressed in the decision under appeal and thus resulted in a fresh case in the appeal proceedings.

However, it is settled case law that parties have no fundamental right to a review at two instances. The Board sees no special reasons within the meaning of Article 11 RPBA to remit the case in view of the development of the inventive-step objection based on documents D4 and D5, particularly as these documents were already considered in the decision under appeal rejecting the opposition. Exercising its discretion under Article 111(1) EPC, the Board therefore decided not to remit the case to the opposition division.

5.2 Objective technical problem

Documents D4 and D5 describe products form BASF comprising particles of vitamin K1 together with tricalcium phosphate as an anti-caking agent. The documents disclose the use of a hydrocolloid, gum arabic, in the preparation of the particles, but do not describe a specific content of the hydrocolloid in the particles (see under "Composition"). Documents D4 and D5 further inform that the described products are stable for at least 36 months when stored in the

unopened original packaging at room temperature (see under "Stabilization/Stability") and suitable for use in mineral preparations (see under "Applications").

Following the assessment in section 3 above, that documents D4 and D5 disclose tricalcium phosphate as separate component of the described products, the only distinguishing feature of the claimed subject-matter with the disclosure of the products in documents D4 and D5 concerns the content of the hydrocolloid making up 15 to 80 wt% of the microcapsule.

The patent proprietor argued that the defined hydrocolloid content in the spay-dried product facilitated the spray-drying process and resulted in a cheaper product with potentially faster release and improved sensory properties whilst maintaining protection of the vitamin K1. In this context, the patent proprietor explained that the hydrocolloid content defined in the claim is reduced in comparison to the hydrocolloid content of 90% as described in document D2 for spray-dried powders produced by F.Hoffmann-La Roche. In its view this reduced content of a viscous hydrocolloid simplifies the spray-drying process.

However, the product described in document D2 from Roche does not correspond to the products from BASF described in documents D4 and D5. Moreover, whilst a spray-drying process may be facilitated by a lower level of viscosity of the liquid to be spray-dried, it is not evident that the defined content of the hydrocolloid in the claimed composition is necessarily correlated to the viscosity of the liquid to be spray-dried for its production or any other specific benefit.

In the absence of a substantiated specific benefit associated with the distinguishing feature of the defined content of the hydrocolloid the Board formulates the objective technical problem underlying the subject-matter of claim 2 of auxiliary request 1 as the provision of an alternative to the compositions of document D4 or D5.

5.3 Assessment of the solution

For solving the identified objective technical problem starting from document D4 or D5, the skilled person would consult prior art describing the preparation of related products. Document D14 describes related products in the form of spray-dried multivitamin compositions comprising vitamin K1 and a hydrocolloid. According to the examples of document D14, such compositions may be prepared by spray-drying an emulsion of a mixture of fat-soluble vitamins, including vitamin K1, in an aqueous solution of equal amounts gum arabic and sucrose (see D14, examples 1-4). In view of the guidance in document D14 regarding a suitable content of the gum arabic and sucrose in liquids for the preparation of spray-dried compositions of fat-soluble vitamins, it would only take routine experimentation for the skilled person to arrive at the content of hydrocolloid as defined in claim 2 of auxiliary request 1 as an alternative to the compositions of documents D4 and D5.

5.4 The Board therefore concludes that the subject-matter of claim 2 of auxiliary request 1 does not involve an inventive step.

Accordingly, auxiliary request 1 does not comply with Article 56 EPC.

6. Auxiliary requests 1a and 3a - Admittance

Auxiliary requests 1a and 3a were filed to further distinguish the claimed subject-matter from the prior art in documents D4 and D5 by requiring that the content of the at least one dietary mineral is at least 10 wt% as defined in dependent claim 6 of the patent as granted. The patent proprietor argued that the multitude of new attacks introduced by the opponent with its appeal, including the objection of lack of inventive step in view of documents D4 and D5, represented an exceptional circumstance, in view of which the filing of auxiliary requests 1a and 3a represented a justified response to the Board's communication pursuant to Article 15(1) RPBA.

However, in its communication pursuant to Article 15(1), issued on 18 July 2025, the Board did not raise any new issue. As explained in section 5.1.2 above, the objection that the subject-matter of the patent as granted lacked novelty and inventive step in view of documents D4 and D5 had already been raised in the notice of opposition. Moreover, the circumstances of the appeal case justified the development of the objection of lack of inventive step against the subject-matter of the auxiliary requests in view of document D4 and D5. The opponent developed this objection against the auxiliary requests in its submission of 13 December 2024 in direct response to the filing of these requests with the patent proprietor's reply to the appeal.

Irrespective of the number of contested amendments to the opponent's case, the patent proprietor could and should therefore have filed auxiliary requests 1a and

3a before the Board issued its communication pursuant to Article 15(1) RPBA. The Board does therefore not recognise any exceptional circumstances that justify the late filing of auxiliary requests 1a and 3a. Accordingly, the Board did not admit these requests into the appeal proceedings.

7. Auxiliary requests 2-4

7.1 Claim 1 of auxiliary request 2 includes the subject-matter of claim 2 of auxiliary request 1. Auxiliary request 2 does therefore not comply with Article 56 EPC for the same reason as set out for auxiliary request 1 in section 5 above.

7.2 Claim 1 of auxiliary request 3 further limits, relative to the independent claims of auxiliary requests 1 and 2, the hydrocolloid content to 20–70 wt% of the microcapsule. As no substantiated specific benefit has been shown for this further restriction, the same formulation of the objective technical problem in view of documents D4 and D5 as the closest prior art, and the same assessment of the proposed solution as set out above in section 5 for claim 2 of auxiliary request 1, apply equally to claim 1 of auxiliary request 3. Auxiliary request 3 therefore does not meet the requirements of Article 56 EPC.

7.3 Claim 1 of auxiliary request 4 includes the subject-matter of claim 2 of auxiliary request 1, except for the additional requirement that the content of the at least one fat-soluble active substance selected from vitamin K1 and provitamins and prodrugs of vitamin K1 is from 0.5 to 3% of the total weight of the microcapsules.

This additional feature does not further distinguish the subject-matter of claim 1 of auxiliary request 4 from the closest prior art represented by document D4, which describes a product with a vitamin K1 content of 1%. Insofar as novel, the subject-matter of claim 1 of auxiliary request 4 therefore lacks inventive step in view of document D4 for the same reason as set out for auxiliary request 1 in section 5 above. Accordingly, auxiliary request 4 does not comply with Article 56 EPC.

8. Auxiliary request 5

Claim 1 of auxiliary request 5 corresponds to claim 1 of auxiliary request 1. The remaining claims 2-14 of auxiliary request 5 are dependent on claim 1. The claimed subject-matter therefore involves an inventive step for the reasons as set out in section 4 above. Auxiliary request 5 therefore complies with Article 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain the patent on the basis of claims 1-14 of auxiliary request 5 filed with the reply to the statement of grounds of appeal, and a description to be adapted if necessary.

The Registrar: The Chairman:

A. Vottner A. Usuelli

Decision electronically authenticated