Internal distribution code:

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

Datasheet for the decision of 1 July 2025

Case Number: T 1184/23 - 3.3.04

Application Number: 13737612.5

Publication Number: 2874507

IPC: A61K31/07, A61K47/14, A61K47/22, A61K47/26, A61K47/36, A61K31/035, A61K31/11, A61K31/232, A23K20/179, A23L29/10, A23L5/44, A23L33/105, A61K9/107

Language of the proceedings: EN

Title of invention:

Aqueous transparent oil-in-water emulsion comprising an emulsified carotenoid

Patent Proprietor:

BASF SE

Opponent:

Oterra A/S

Headword:

Molecular weight/BASF

Relevant legal provisions:
EPC Art. 84
RPBA 2020 Art. 12(4), 12(6)

Keyword:
Claims - clarity after amendment (no)

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

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

Case Number: T 1184/23 - 3.3.04

D E C I S I O N
of Technical Board of Appeal 3.3.04
of 1 July 2025

Appellant: (Patent Proprietor)	BASF SE Carl-Bosch-Strasse 38 67056 Ludwigshafen am Rhein (DE)
Representative:	Meissner Bolte Partnerschaft mbB Patentanwälte Rechtsanwälte Postfach 86 06 24 81633 München (DE)
Respondent: (Opponent)	Oterra A/S Agern Alle 24 2970 Hørsholm (DK)
Representative:	Willnegger, Eva Montgomery IP Boulevard Saint Michel 10/4 1150 Bruxelles (BE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 13 April 2023 revoking European patent No. 2874507 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairwoman	M. Pregetter
Members:	R. Hauss
	L. Bühler

Summary of Facts and Submissions

I. European patent No. 2 874 507 (the patent in suit) was granted with a set of eight claims. Claim 1, in summary, relates to a transparent aqueous oil-in-water emulsion containing a carotenoid and further components. The component relevant to this decision is *"octenyl succinate starch in a concentration of 0.5-600 ppm"*.

II. The patent in suit was opposed under Article 100(a), (b) and (c) EPC on the grounds that the claimed subject-matter lacked novelty and inventive step, 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. With its reply to the notice of opposition, dated 14 February 2022, the patent proprietor submitted an amended set of claims as its main request. By letter of 14 December 2022 (the final date for making written submissions and/or amendments set by the opposition division under Rule 116 EPC), it submitted two further amended sets of claims as auxiliary requests 1 and 2.

IV. In claim 1 of the amended main request and claim 1 of each of auxiliary requests 1 and 2 the feature

> *"octenyl succinate starch in a concentration of 0.5-600 ppm"*

was modified to read:

> *"octenyl succinate starch in a concentration of 0.5-600 ppm having a molecular weight MW-distribution of 10000-2000000 g/mol".*

V. In a submission filed on 14 December 2022, the opponent contended that the parameter *"molecular weight MW-distribution of 10000-2000000 g/mol"* was not clear since the opposed patent did not disclose any method for determining the molecular weight MW-distribution (see the opponent's letter, page 9). In this context, the opponent also filed the following documents:

D24: International Journal of Pharmaceutics 579, 119163 (2020)

D29: Starch 68, 846-853 (2016)

VI. The decision under appeal is the opposition division's decision revoking the patent in suit, announced at the oral proceedings on 14 February 2023 and posted on 13 April 2023.

VII. The decision under appeal (see page 4) indicates, erroneously, that it is based on versions of the claims of the main request, auxiliary request 1 and auxiliary request 2 received by letter of 14 February 2023. There is no indication in the case file that amended claim requests were filed on that date (the day of the oral proceedings before the opposition division). The versions of the claim requests that were considered in the decision under appeal are in fact those of the main request of 14 February 2022 and of auxiliary requests 1 and 2 of 14 December 2022 (see the minutes of the oral proceedings before the opposition division, point 2).

VIII. The decision under appeal includes, *inter alia*, the following findings.

(a) The opposition division admitted documents D24 and D29.

(b) The feature in claim 1 of the main request requiring the component octenyl succinate starch to have a molecular weight MW-distribution of 10000-2000000 g/mol lacked clarity (Article 84 EPC). This was because no measurement method was specified for this parameter.

(c) As the offending feature was also present in the claims of each of auxiliary requests 1 and 2, these requests lacked clarity for the same reason.

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

X. With its statement setting out the grounds of appeal, the appellant presented three sets of claims as its main request and auxiliary requests 1 and 2. These requests are identical to the corresponding requests considered in the decision under appeal. As auxiliary request 3, the appellant requested the maintenance of the patent as granted. The appellant also submitted the following document:

D30: J. Sep. Sci. 33, 3537-3554 (2010)

XI. With its reply to the appeal the opponent (respondent) submitted documents D31 to D35; with a later submission it submitted document D36.

XII. In a communication under Article 15(1) RPBA issued in preparation for oral proceedings, the board advised the parties, *inter alia*, that auxiliary request 3 would not be admitted under Article 12(6) RPBA for want of a reason why the circumstances of the appeal case might justify returning to the version of the patent as granted.

XIII. Oral proceedings before the board took place on 1 July 2025. At the close of the oral proceedings, the board announced its decision dismissing the appeal.

XIV. The appellant's arguments can be summarised as follows.

Clarity

Since molecular weight was not an unusual parameter for characterising polymers, the person skilled in the art could be expected to know how to reliably determine a molecular weight distribution.

While several methods for determining molecular weight and molecular weight distributions were known (as set out in review articles D29 and D30), it would be clear to the person skilled in the art that SEC (size exclusion chromatography) coupled with MALS (multi-angle light scattering) was the method of choice for determining the molecular weight MW-distribution of octenyl succinate starch in the molecular weight range defined in claim 1. This was corroborated by document D24, which disclosed the use of this method for characterising octenyl succinate starches.

Were the board to find that, in view of the skilled person's common general knowledge, more than one method might be considered for determining the parameter in question, then it was submitted that all methodologies would yield the same result for the polymer and the range as defined in claim 1. The respondent had failed to show that differences between results obtained by different methodologies would be outside the appropriate limit of measurement accuracy.

Admittance of auxiliary request 3

The admittance of auxiliary request 3 on appeal could be justified by the circumstances of the appeal case.

In particular, the appellant had been taken by surprise by the respondent's objection under Article 84 EPC, presented at a late stage of the proceedings at first instance, and by the opposition division's subsequent finding of a lack of clarity. At the oral proceedings before the opposition division, the appellant would have needed more time to decide whether to file further requests. Pursuing the maintenance of the patent as granted was not an evident option since further objections had been raised against the claims as granted. The appellant had presented auxiliary request 3 at the earliest opportunity, namely with the statement setting out the grounds of appeal.

XV. The respondent's arguments can be summarised as follows.

Clarity

The parametric claim feature *"molecular weight MW-distribution of 10000-2000000 g/mol"* lacked clarity because no method for determining this parameter was specified. Various methodologies were known in the art. It would not be generally understood that only one particular method would be chosen for determining the molecular weight MW-distribution of the octenyl succinate starch materials in question. Furthermore, it was not to be expected, nor had it been shown, that all methodologies would yield the same result.

Admittance of auxiliary request 3

The respondent's objection of lack of clarity had been submitted on time for the final date under Rule 116 EPC and in response to the appellant filing an amended set of claims that included an unclear feature. It was self-evident that a "preliminary" opinion issued by an opposition division was not binding. It was a normal

occurrence for an opposition division to take up – and agree with – an objection submitted by an opponent. This typical situation did not qualify as a circumstance under Article 12(6) RPBA that could justify returning to the version of the patent as granted.

XVI. The appellant requested that the decision under appeal in respect of non-compliance with Article 84 EPC be set aside and that the case be remitted to the opposition division for further prosecution on the basis of the claims of the main request and auxiliary requests 1 and 2, all filed with the statement setting out the grounds of appeal.

If the board were to decide against remittal of the case, the appellant requested that the patent be maintained in amended form on the basis of the claims of the main request or one of auxiliary requests 1 and 2. As auxiliary request 3, the appellant requested that the patent be maintained as granted.

Furthermore, the appellant requested that document D30 be admitted and that documents D31 to D36 not be admitted.

The appellant also requested that Ms Hirschberg, as a technical expert, be allowed to make oral submissions on molecular weight determination.

XVII. The respondent requested that the appeal be dismissed.

Furthermore, the respondent requested that the appellant's submissions of 23 May 2024 not be admitted under Article 13(2) RPBA, and that auxiliary request 3 not be admitted. It also requested that document D30 not be admitted and that document D31 be admitted, if document D30 was admitted.

Reasons for the Decision

1. Clarity - main request (Article 84 EPC)

1.1 It was not in dispute that not all octenyl succinate starches have a molecular weight MW distribution of 10000-2000000 g/mol. As a consequence, this technical feature is limiting. The respondent's objection is that this feature, and thus the subject-matter of claim 1, lacks clarity.

1.2 According to decision G 3/14 (OJ EPO 2015, A 102), in considering whether, for the purposes of Article 101(3) EPC, a patent as amended meets the requirements of the EPC, the claims of the patent may be examined for compliance with the requirements of Article 84 EPC only when, and then only to the extent that, the amendment introduces non-compliance with Article 84 EPC.

1.3 In the case in hand, the criterion formulated by the Enlarged Board in G 3/14 is met. The claims as granted do not contain the parametric feature:

"having a molecular weight MW-distribution of 10000-2000000 g/mol"

If claim 1 lacks clarity due to this feature, then it is the amendment adding it to claim 1 that caused the claim's non-compliance with Article 84 EPC.
In this situation, the respondent's objection under Article 84 EPC may be examined.

1.4 In accordance with the established case law of the EPO, it is permissible under Article 84 EPC to characterise a claimed invention by a parameter, provided that certain requirements are met (see Case Law of the

Boards of Appeal of the European Patent Office, 10th ed., 2022, II.A.3.5).

1.5 The applicant (or, in the case in hand, the patent proprietor) choosing to define the scope of a claim by parameters should ensure that a person skilled in the art can easily and unambiguously verify whether they are working inside or outside the scope of the claim.

In particular,

(a) as the claim must be clear in itself, the method for measuring the parameter in question must appear completely in the claim itself, or at least the claim must contain a reference to the complete method.

If the method for determining the parameter is not indicated in the claim, the requirements of Article 84 EPC can still be met if it can be convincingly shown that

(b) it is common general knowledge of the skilled person which method is to be employed

or

(c) all the methodologies known in the relevant technical field for determining the parameter in question yield the same result within the appropriate limit of measurement accuracy.

These principles are also set out in the Guidelines for Examination in the EPO. The relevant passage of the Guidelines was cited by the opposition division in the decision under appeal (see the Guidelines, Chapter F-IV, 4.11, in the version of March 2022, and the decision under appeal, Reasons 4.4.2.2).

1.6 In the case in hand, claim 1 of the main request does not indicate which method should be used to determine

the parameter *"molecular weight MW-distribution"*. Thus, the claim fails to meet requirement (a). Indeed, the method to be used is not mentioned anywhere in the patent specification.

1.7 The appellant chose to introduce a definition relying on a parameter into claim 1, without specifying a method for measuring the parameter. Thus, the appellant is basically asserting that the claimed subject-matter is nevertheless clear because either exception (b) or exception (c) applies (see point 1.5 above). As a consequence, the burden is on the appellant to show, convincingly, that either criterion (b) or criterion (c) is met.

1.8 The board is of the view that this has not been convincingly shown, for the following reasons.

1.8.1 To start with, the appellant's argument that molecular weight and molecular weight distribution are not unusual parameters for characterising a polymer is irrelevant. What is relevant is whether the parameter in question can be determined by different known methodologies which may yield different results. This can also be the case for a "usual" parameter, viscosity being a well-known example.

Criterion (b)

1.8.2 The board is not convinced that the person skilled in the art would consider no other method than SEC-MALS for determining the molecular weight distribution of octenyl succinate starch.

1.8.3 The post-published journal article D24 describes an experiment where the weight-average molecular weight (termed "M_w" in D24) and the molecular weight distribution of several octenyl succinate starches were

determined by HPSEC-MALS (see D24: abstract; page 2, points 2.1 and 2.2.6; page 4, right-hand column, fifth line from the bottom; page 5, Table 1). The weight-average molecular weight M_w of some of the samples was found to be within the range of 10000 to 2000000 g/mol (see Table 1). While this may suggest that SEC-MALS is a suitable method for determining the molecular weight distribution according to claim 1, it cannot be deduced from the content of D24 that the person skilled in the art would not consider any other method.

1.8.4 D29 and D30 are review articles on the molecular weight analysis of starches (D29) and the characterisation of branched polysaccharides using multiple-detection size-separation techniques (D30). Neither of them refers specifically to octenyl succinate starch materials.

D29, published after the effective date of the patent, contains a number of references to older publications and may thus be regarded, at least in part, as representing the skilled person's common general knowledge around the effective date.

1.8.5 D29 teaches that a number of methods are available to researchers for estimating molecular weights and molecular weight distributions of starches. D29 focuses on several methods, namely SEC or asymmetric flow field flow fractionation (which may be abbreviated to AFFFF or AF4) coupled with MALS, viscometry and sedimentation velocity or sedimentation equilibrium in the analytical ultracentrifuge (see D29: abstract). Table 1 in D29 summarises some advantages and disadvantages of each method.

1.8.6 The board is of the view that the information provided in Table 1 or elsewhere in D29, such as upper separation limits for molecular weights, or the remark

that the SEC technique "has been extensively used" to separate starch fractions (page 847, second paragraph), would not lead the person skilled in the art to consider only SEC-MALS for determining the parameter of claim 1, to the exclusion of all other methods. Even less is this evidence that only a single standard method was considered relevant for measuring the molecular weight of octenyl succinate starch.

1.8.7 The appellant also argued that the person skilled in the art would only consider "absolute" methods not requiring standardisation because claim 1 does not provide any information on calibration and molecular weight standards. However, the board is unable to see how the fact that claim 1 does not indicate any method or measurement conditions at all could lead to the conclusion that specific methods are excluded.

1.8.8 D30 states that its objective is to present "the best current means to obtain reliable branch chain and size distributions using size-separation technologies coupled with number-, mass- and molecular-weight-sensitive detection", and to critically appraise problems with current technologies (see D30: abstract).

1.8.9 In a similar way to D29, D30 states that SEC coupled with multiple detection was, at the time of writing, the most readily available and most developed technology for the size separation of branched polysaccharides and for obtaining their size distributions (see D30: page 3544, second paragraph). Once more, it cannot be inferred from this that SEC-MALS is the only method that can be considered in the context of claim 1. For instance, flow fractionation not using a stationary phase, such as AF4, and

hydrodynamic chromatography (HDC) are also described as separation techniques.

1.8.10 Thus, both D29 and D30 present several possible methodologies. Nothing in these documents gives rise to the conclusion that, according to the skilled person's common general knowledge, only the SEC-MALS technique would be considered for determining the parameter in claim 1.

Criterion (c)

1.8.11 As all these separation techniques are based on different physical principles, they will not necessarily provide the same experimental results (within the appropriate limit of measurement accuracy).

1.8.12 The appellant submitted that since it would be impossible to prove that all methods yielded the same results, it would be unreasonable to demand such proof. However, while in the case in hand it may be difficult to demonstrate convincingly that criterion (c) is met, the consequence cannot be that the necessary evidence can be dispensed with. The conclusion is rather that the parameter in question should have been accompanied in claim 1 by a method for its determination because it is not possible in this case to rely on exceptions (b) and (c).

1.9 As the clarity requirements for defining an invention by a parameter are not met, the subject-matter of claim 1 of the main request lacks clarity (Article 84 EPC).

2. Clarity - auxiliary requests 1 and 2

2.1 The issue regarding clarity is the same in the case of auxiliary requests 1 and 2 since claim 1 in both requests contains the feature:

"octenyl succinate starch in a concentration of 0.5-600 ppm having a molecular weight MW-distribution of 10000-2000000 g/mol"

2.2 Hence, the subject-matter of claim 1 of each of auxiliary requests 1 and 2 lacks clarity for the same reasons as set out above for claim 1 of the main request (Article 84 EPC).

3. Admittance of auxiliary request 3

3.1 Throughout the proceedings before the opposition division, the appellant requested that the patent be maintained in amended form (see point III. above).

3.2 At the oral proceedings of 14 February 2023, the opposition division advised the parties of its finding that the claims of the amended main request, auxiliary request 1 and auxiliary request 2 did not comply with the requirements of Article 84 EPC with respect to the feature *"having a molecular weight MW-distribution of 10000-2000000 g/mol"*. The appellant, after a break, stated that it had no further requests (see the minutes of the oral proceedings, points 7 to 10).

3.3 Since the appellant, in the proceedings before the opposition division, did not defend the patent in the version as granted, the opposition division was prevented from taking a decision on the maintenance of the patent as granted.

3.4 Under these circumstances, the appellant's return to the version of the patent as granted (current auxiliary request 3) is an amendment under Article 12(4) RPBA which, under Article 12(6) RPBA, is not to be admitted.

3.5 The general development of the proceedings at first instance described by the appellant does not constitute a circumstance that could justify the admittance of auxiliary request 3 on appeal. Although the respondent did not raise its objection for lack of clarity promptly after the appellant presented the amended main request, it nevertheless did so well in advance of the oral proceedings before the opposition division.
In opposition proceedings, a patent proprietor should be prepared to answer all objections raised by an opponent and may also be expected to prepare suitable fallback positions in case any issue is decided in the opponent's favour.

3.6 What is decisive in the case in hand is that the emergence of additional objections to a set of claims pursued in the proceedings before the opposition division does not change the fact that the patent as granted was never defended.

3.7 For these reasons, the board decided not to admit auxiliary request 3 (Article 12(6) RPBA).

4. Requests concerning the admittance of documents D30 and D31 (Article 12 RPBA)

The board admitted document D30 (filed by the appellant; see point X. above). Since the appeal was dismissed and the outcome of the appeal case is thus in the respondent's favour, a reasoned decision on the admittance of D30 is not required. Nor is it necessary

for the board to decide on the admittance of D31 (requested by the respondent; see point XVII. above).

5. Request concerning submissions by a technical expert

In the course of the debate at the oral proceedings before the board, the appellant did not consider oral submissions by its technical expert to be necessary. Hence, no decision on the admittance of such submissions was required.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairwoman:

I. Aperribay M. Pregetter

Decision electronically authenticated