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Datasheet for the decision of 19 March 2026

Case Number: T 0638/24 - 3.3.09

Application Number: 18170367.9

Publication Number: 3388502

IPC: A23L5/20, C11B3/12, C11B3/10

Language of the proceedings: EN

Title of invention:
METHOD FOR REDUCING THE 3-MCPD/GLYCIDYL ESTER CONTENT IN OILS

Patent Proprietor:
Cargill, Incorporated

Opponent:
Bunge Loders Croklaan B.V.

Headword:
REFINED OIL/Cargill

Relevant legal provisions:
EPC Art. 54(2), 83
RPBA 2020 Art. 11, 12(2)

Keyword:
Main request: novelty - (No)
Auxiliary request 1: novelty and inventive step - (Yes)

Decisions cited:
G 0001/24, T 0322/87

Catchword:

Europäisches Patentamt
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Beschwerdekammern

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Case Number: T 0638/24 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 19 March 2026

Appellant: (Patent Proprietor)	Cargill, Incorporated 15407 McGinty Road West Wayzata, MN 55391 (US)
Representative:	Strych, Sebastian Mitscherlich PartmbB Karlstraße 7 80333 München (DE)
Respondent: (Opponent)	Bunge Loders Croklaan B.V. Hogeweg 1 1521 AA Wormerveer (NL)
Representative:	Potter Clarkson Chapel Quarter Mount Street Nottingham NG1 6HQ (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 11 March 2024 revoking European patent No. 3388502 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	A. Haderlein
Members:	A. Veronese
	L. Basterreix

Summary of Facts and Submissions

I. The appeal was filed by the patent proprietor (appellant) against the opposition division's decision revoking the European patent.

II. With its notice of opposition the opponent had requested revocation of the patent in its entirety on the grounds under Article 100(a) (lack of novelty and of inventive step), 100(b) and 100(c) EPC.

III. Claim 1 of the granted patent reads as follows:

"*A process for the production of a refined oil having a reduced 3-MCPD ester and/or glycidyl ester content characterized in that it comprises subjecting an oil to the following steps, in order: (a) a bleaching step, (b) a deodorization step, and (c) a final bleaching step with activated bleaching clay, and (d) a final deodorization step is carried out at least 40°C lower than deodorization step (b) and the final deodorization step (d) is carried out at a temperature less than 180°C.*"

IV. The documents submitted during the opposition proceedings included:

D1: GB A 707454

D11: Baileys' Industrial Oil and Fat Products, Sixth Edition, Six Volume Set, 2005, Chapter 8, Deodorization

D16: Baileys' Industrial Oil and Fat Products, Sixth Edition, Six Volume Set, 2005, Chapter 7: Bleaching

V. In its decision, the opposition division found *inter alia* that:

- The subject-matter of claim 1 as granted did not contain subject-matter extending beyond the application as filed. Basis for the claimed activated bleaching clays and the bleaching temperature was found on page 5, lines 20-21 and in claim 2 as filed.

- The claimed invention was sufficiently disclosed. The patent did not specify essential steps necessary to reduce the amount of the relevant esters.

- The process claimed in the patent as granted and in auxiliary requests 1 and 3 to 12 was not novel over the teaching of D1, which disclosed a method for refining an oil including all the claimed steps. The method inherently reduced the content of 3-MCPD ester and/or glycidyl ester in the oil. The method of D1 did not include a filtering step to remove activated charcoal after the bleaching step (a). However, the claimed process did not require filtration either. Deodorization could occur after bleaching without the need for filtration.

- Auxiliary request 2 was not admitted into the opposition proceedings.

VI. With its statement setting out the grounds of appeal the appellant filed, *inter alia*, auxiliary request 1.

VII. Claim 1 of auxiliary request 1 reads:

"*1. A process for the production of a refined oil having a reduced 3-MCPD ester and/or glycidyl ester content characterized in that it comprises subjecting an oil to the following steps, in order: (a) a bleaching step, (b) a deodorization step, (c) a final bleaching step with activated bleaching clay,, and (d) a final deodorization step, wherein final deodorization step (d) is carried out at a temperature at least 40°C lower than deodorization step (b), and the final deodorization step (d) is carried out at a temperature less than 180°C, and wherein the refined oil is derived from palm oil.*"

VIII. In a communication issued under Article 15(1) RPBA in preparation for the oral proceedings, the board expressed the preliminary opinion that the subject-matter of claim 1 as granted was not novel over D1, whereas that of auxiliary request 1 was novel and sufficiently disclosed.

IX. In a letter filed in reply to the board's communication, the opponent (respondent) stated that its request for oral proceedings was withdrawn on condition that the board maintained its preliminary opinion, that the case was remitted to the opposition division, and that the appellant withdrew its own request for oral proceedings.

X. The appellant replied in writing, agreeing to withdraw its request for oral proceedings on condition that the board maintained its preliminary opinion and that the case was remitted to the opposition division.

Requests

XI. The appellant requested that the decision under appeal be set aside and that the case be remitted to the opposition division on the basis of the patent as granted or, alternatively, on the basis of one of auxiliary requests 1 to 13 filed with the statement of grounds of appeal. Auxiliary requests 1 to 12 correspond to auxiliary requests 1 to 12 filed during the opposition proceedings.

XII. The opponent (respondent) requested that the appeal be dismissed.

XIII. The arguments presented by the parties during the appeal proceedings are set out in the Reasons for the Decision.

Reasons for the Decision

Main request

1. *Amendments*

2. The respondent did not contest the opposition division's finding that the claims of the main request do not extend beyond the content of the parent application as filed. There are no reasons to diverge from this finding.

3. *Sufficiency of disclosure*

3.1 The respondent contested the opposition division's finding that the claimed invention is sufficiently disclosed. The respondent argued that, if the feature

"reduced 3-MCPD ester and/or glycidyl ester content" in claim 1 were to be considered a limiting functional feature, then the claimed invention would be insufficiently disclosed, because the patent did not provide sufficient information on how to reduce the amount of the relevant esters. Furthermore, no reference point was provided for what constituted a "reduced 3-MCPD ester and/or glycidyl ester content". In addition, the examples in the patent related only to palm oil. The variability in 3-MCPD ester content in natural oils was not taken into account either. Consequently, the invention could not be carried out across the entire scope claimed.

3.2 This conclusion is unconvincing. The respondent's arguments essentially concern the interpretation of the feature "reduced 3-MCPD ester and/or glycidyl ester content". However, claim 1 simply requires that the process reduce the content of 3-MCPD and/or glycidyl esters in an oil which contains them.

3.3 The examples in the patent demonstrate that the content of 3-MCPD esters and/or glycidyl esters in palm oil decreases when the bleaching and deodorization steps are performed. There is no evidence that the same effect does not occur with oils other than palm oil.

3.4 The respondent has not provided any evidence showing that, based on the teaching of the patent and common general knowledge, a person skilled in the art would not be able to carry out the claimed steps and/or that these steps do not reduce the amount of the relevant esters in an oil containing them.

3.5 Thus the claimed invention is sufficiently disclosed.

4. *Novelty*

4.1 Claim 1 concerns a process for producing a refined oil "having reduced 3-MCPD ester and/or glycidyl ester content" which involves the following steps, in order:

- (a) bleaching
- (b) deodorization
- (c) final bleaching with activated bleaching clay
- (d) final deodorization at a temperature of at least 40°C lower than in step (b) and below 180°C.

4.2 The appellant contested the opposition division's finding that this process lacked novelty over that disclosed in the example in the right-hand column on page 2 of D1.

4.3 The appellant argued that the claimed process did not just have to be suitable to produce, but rather had to result in the formation of, a refined oil having reduced 3-MCPD/glycidyl ester levels. There was no evidence that the oil obtained by the process of D1 contained a reduced amount of these esters. Moreover, D1 did not disclose the claimed steps, in the specified order.

4.4 Concerning the first point, it is clear from claim 1 that the claimed process must result in a refined oil. What must be established is the meaning of the wording "reduced 3-MCPD ester and/or glycidyl ester content" in the context of the present invention. According to the appellant, this wording required the process to result in a refined oil having a 3-MCPD ester and/or glycidyl ester content which was lower than that found in an oil subjected to standard refining processes. The process of D1 did not meet this requirement.

4.5 This argument is not persuasive. Claim 1 defines neither a "standard" refining process nor the amount of esters found in oils refined by these processes. Furthermore, there is no evidence that certain refining processes were considered "standard" according to common general knowledge at the filing date. What is more, the ester content in a refined oil depends on the type of oil used, its origin, the extraction method and the conditions implemented during refinement. For these reasons, the purported reference to an undefined refined oil, allegedly obtained by an undefined "standard" process, is not suitable to distinguish the claimed invention from the prior art.

4.6 Paragraph [0044] of the description of the opposed patent makes a passing reference to "*standard refining (i.e. standard degumming, bleaching and deodorization)*". However, there is no further guidance on how these refining methods should be carried out. There is no evidence that specific standardised methods and working conditions for carrying them out were part of the common general knowledge at the filing date either. Thus this passage cannot be relied upon to limit the scope of claim 1.

4.7 The following should also be considered. In G 1/24 the Enlarged Board of Appeal stated that the claims are the starting point and the basis for assessing the patentability of an invention under Articles 52 to 57 EPC. Furthermore, it stated that the description and any drawings shall always be consulted to interpret the claims when assessing patentability.

4.8 However, G 1/24 cannot be invoked to construe a claim relying on an unspecified and unqualified definition,

like the aforementioned "standard methods" for refining oils mentioned in the description.

4.9 Reading claim 1 and consulting the description, taking into account the skilled person's perspective, it is clear that what is claimed is a process which reduces the content of 3-MCPD and/or glycidyl esters in an oil which contains them. Furthermore, that the process includes the specified steps, in the given order.

4.10 Paragraph [0043] of the opposed patent teaches that soybean oil contains 3-MCPD and/or glycidyl esters and that their amount is reduced when carrying out the claimed process.

4.11 Soybean oil is the same oil which is refined in the process disclosed in example 1 of D1. The question to be answered is whether D1 discloses the processing steps defined in claim 1, in the given order. This is because, if the steps are identical, the process of claim 1 must inevitably result in a refined oil "having a reduced 3-MCPD and/or glycidyl ester content" within the meaning of claim 1.

4.12 The reference to an "order" in claim 1 implies that four distinct steps, in which either bleaching or deodorization occurs, must be identifiable. Since the open wording "comprising" is used in claim 1, other steps may be carried out in addition to and between the specified ones.

4.13 As explained in the description, bleaching is a step in which the impurities present in an oil are removed. Typically, bleaching is carried out using bleaching agents, such as activated bleaching clays or activated carbon, which absorb the impurities on their surface.

4.14 Deodorization is a step in which the volatile components of an oil, such as free fatty acids, aldehydes and ketones, are removed by treating (or "stripping") the oil with steam, nitrogen or inert gas. Deodorization is typically performed at elevated temperatures and reduced pressure, in order to volatilize and remove the volatile components.

4.15 Claim 1 does not specify the conditions under which the bleaching and deodorization steps are to be carried out. The appellant argued that deodorization could not be performed after bleaching unless the bleaching agent was first removed by filtration. In its view, page 285 of D16 taught that bleaching clays must be removed by filtration after a bleaching step. Furthermore, it submitted that, according to page 349 of D11, traces of bleaching agents could cause darkening of the oil during the deodorization step.

4.16 The appellant's arguments are not convincing. As submitted by the respondent, none of the cited documents indicates that deodorization cannot be performed if a composition is not filtered after bleaching. Even assuming that some darkening of the oil were to occur in the absence of filtration, there is no evidence to suggest that this would hinder deodorization.

4.17 Moreover, the passage bridging page 1, line 66 and page 2, line 7 of D1 states that treating an oil with steam in the presence of adsorbents induces bleaching while simultaneously removing the substances responsible for taste and odours, i.e. results in deodorization. No filtering is mentioned. No filtering is mentioned in examples 1 and 2 of the patent either.

4.18 This confirms that no filtration is necessary before deodorization to carry out the claimed process. Furthermore, it means that there may be processing steps which induce both bleaching and deodorization.

4.19 It was not disputed that D1 describes processes for purifying an oil, such as palm oil or soybean oil. These processes include deodorization and bleaching steps and may include further steps. The appellant conceded that the process described in the example in the right-hand column of page 2 of D1 included the following steps, in the given order:

1) deodorization (page 2, lines 82 to 89);
2) bleaching (page 2, lines 89 to 93);
3) a "further treatment"(page 2, lines 93 to 102);
4) bleaching with activated bleaching clay (page 2, lines 105 to 109); and
5) deodorization (page 2, lines 113 to 115).

4.20 However, in its opinion this process did not anticipate the claimed one, because:

- Steps 1) and 2) were carried out in the opposite order to those in claim 1.

- The steps in D1 were not clearly separated as required by claim 1, and no filtration step - implicitly required by the claimed process - was disclosed.

- The temperature specified for the final deodorization step in claim 1 was not disclosed.

4.21 The appellant's arguments fail to convince.

4.22 The passage on page 2, lines 82 to 89 describes a step in which an oil is mixed with activated charcoal and heated to up to 290°C while steam is passed through the oil. Regardless of whether deodorization occurs under these conditions, there is no doubt that bleaching takes place due to the presence of activated charcoal. This is confirmed by the more general description in lines 12 to 15 on page 2, which explicitly states that bleaching occurs under these conditions. Thus step a) of claim 1 is disclosed in D1. Since the heating is stopped and the steam supply is reduced at this point, this step a) is clearly distinguished from the subsequent step.

4.23 The passage in lines 93 to 102 on page 2 describes a further, separate step in which the steam distillation of the oil is continued. The temperature is initially 290°C, but is then decreased, because water cooling is applied. Once the temperature reaches 220°C the cooling is stopped and the steam distillation is continued for one hour at the same temperature. During this period, the steam supply remains the same as during the heating phase (7 kg per hour).

4.24 Since continuous steam distillation is carried out under conditions that inevitably result in stripping of volatile compounds from the oil, this step qualifies as the deodorizing step b) of claim 1. This is confirmed by the general description of D1, in lines 5 to 11 on page 2, which states that steam treatment removes substances responsible for taste and smell from the oil and that the treatment with steam can be carried out at a temperature of between 180 and 250°C to achieve extensive deodorization. As already mentioned above, it is irrelevant that activated charcoal remains in the

oil. Accordingly, step b) of claim 1 is also unambiguously disclosed.

4.25 It was further undisputed that the step described in lines 105 to 109 of page 2, carried out in the presence of activated bleaching clay, qualifies as the claimed bleaching step c), and that the step described in lines 113 to 115 of page 2 constitutes a deodorizing step. Since this second deodorizing step is performed at 150°C - which is at least 40°C lower than the 220°C applied during the first deodorizing step, it qualifies as the final deodorizing step d) in claim 1.

4.26 For these reasons, as already concluded by the opposition division and maintained by the respondent, the claimed process lacks novelty over the example in the right-hand column on page 2 of D1.

4.27 The appellant mentioned a decision from an opposition division in a parallel case relating to European patent EP 3 385 360. The finding in that case is substantially similar to the present one. The only difference is that, in that case, unlike claim 1 of the main request, the claim under examination was limited to refining a palm oil. This was the sole distinction between the claimed process and that of the example of D1: see page 5, last-but-one paragraph.

4.28 In this context it is noted that the respondent requested that the arguments concerning the interpretation of claim 1 presented by the appellant in its statement of grounds of appeal not be admitted. The board does not agree. These arguments constitute, at most, a refinement of those set out during the opposition proceedings relating to the issue of novelty over D1. They merely raise questions of claim

interpretation. Moreover, as noted by the appellant, the relevant issues had already been addressed during the opposition proceedings.

Auxiliary request 1

5. *Amendments*

6. Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that it specifies that the refined oil produced by the process is derived from palm oil. Palm oil is the preferred refined oil according to the disclosure of the application as filed (see page 3, line 26 and the examples of the application as filed). As for the main request, the respondent has not raised objections of added subject-matter against auxiliary request 1. The board does not see reasons to raise any of its own motion.

7. *Sufficiency of disclosure*

7.1 The invention claimed in the main request has already been found to be sufficiently disclosed. No additional arguments have been put forward regarding the sufficiency of the invention claimed in auxiliary request 1. Accordingly, the same conclusions apply.

8. *Novelty*

8.1 As mentioned above, claim 1 of auxiliary request 1 differs from claim 1 of the main request in that it specifies that the refined oil produced by the process is derived from palm oil. This means that the oil which is refined in the claimed process is palm oil.

8.2 The opposition division and the respondent argued that, although the example in the right-hand column of page 2 of D1 related to the refinement of soybean oil, the general teaching of D1 indicated that the disclosed process could be used to refine other oils, including palm oil. Palm oil was explicitly mentioned in lines 41 to 44 on page 2 of D1. The respondent drew attention to decision T 322/87, arguing that, when examining novelty, it was permissible to combine parts of the general disclosure of a document with specific examples. Accordingly, in its opinion, the claimed subject-matter was not novel over D1.

8.3 These arguments fail to convince. Whether the teaching presented in a general part of a document can be combined with that of specific embodiments, such as a disclosed example, depends on the circumstances of the particular case.

8.4 The example set out on the right-hand side of page 2 of D1 describes a specific process for refining soybean oil, employing specific steps and working conditions that are not mentioned in the general part of the description. It is reasonable to assume that this process was specifically tailored to optimise the purification of soybean oil.

8.5 Even considering the teaching of D1 as a whole, there is no direct and unambiguous disclosure of a process in which palm oil is refined using the same steps and working conditions as those in the example on page 2. This is particularly evident in view of the statement on page 2, line 44 that palm oil is "particularly difficult" to purify, which rather suggests that different or adapted conditions would be required for its refinement.

8.6 For these reasons, the process claimed in auxiliary request 1 is novel over the teaching of D1. This finding is in line with the finding of the opposition division in the parallel case EP 3 385 360.

9. *Remittal of the case*

9.1 The decision under appeal is limited to the issues of added subject-matter, sufficiency of disclosure, and novelty. The parties requested that, should the board find that auxiliary request 1 meets these requirements, the case be remitted to the opposition division for examination of inventive step.

9.2 As set out in Article 12(2) RPBA 2020, the primary object of the appeal proceedings is to review the decision under appeal in a judicial manner. This principle would not be respected if the board were to conduct a complete examination of issues which were not dealt with by the opposition division. Thus it appears that special reasons are present for remitting the case (Article 11 RPBA 2020).

Order

For these reasons it is decided that:

1. The decision of the opposition division is set aside.

2. The case is remitted to the opposition division for further prosecution on the basis of the claims of auxiliary request 1.

The Registrar: The Chairman:

K. Götz-Wein A. Haderlein

Decision electronically authenticated