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**Datasheet for the decision
of 19 June 2018**

Case Number: T 0218/15 - 3.3.06

Application Number: 04803094.4

Publication Number: 1769058

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C11B3/06, C10L1/02, C10L1/18

Language of the proceedings: EN

Title of invention:
A NEW BIOFUEL COMPOSITION

Patent Proprietor:
Monsanto S.A.S.

Opponent:
Arbeitsgemeinschaft Qualitätsmanagement Biodiesel e.V.

Headword:
Biofuel composition/Monsanto

Relevant legal provisions:
EPC Art. 52(1), 54, 56
RPBA Art. 13

Keyword:

Novelty - (no) - Main Request

Inventive step - (no) - Auxiliary Requests II and III

Late-filed auxiliary requests - admitted (no) - Auxiliary
Request IV

Decisions cited:

Catchword:



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
Fax +49 (0)89 2399-4465

Case Number: T 0218/15 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 19 June 2018

Appellant: Arbeitsgemeinschaft Qualitätsmanagement
(Opponent) Biodiesel e.V.
Claire-Waldoff-Strasse 7
10117 Berlin (DE)

Representative: Müller & Schubert
Patentanwälte
Schlüterstrasse 37
10629 Berlin (DE)

Respondent: Monsanto S.A.S.
(Patent Proprietor) Europarc du Chêne
1, rue Jacques Monod
69673 Lyon Cedex (FR)

Representative: Bosch, Henry
Office Hanssens Colens
Square Marie-Louise 40, bte 19
1000 Bruxelles (BE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 23 October 2014
rejecting the opposition filed against European
patent No. 1769058 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman L. Li Voti
Members: G. Santavicca
J. Hoppe

Summary of Facts and Submissions

I. The appeal lies from the decision of the Opposition Division of the European Patent Office rejecting the opposition filed against **European patent No. 1 769 058**.

II. Claim 1 according to the patent as granted reads as follows:

"1. Rapeseed alkyl-ester composition suitable for use as biodiesel, comprising more than 72%, 75%, 80%, or 85%, of mono-alkyl ester(s) of oleic acid, less than 7%, 6,5%, 6% or 5,5% of mono-alkyl ester (s) of saturated fatty acids, and less than 4%, 3,5%, 3%, 2,5%, 2%, 1,5% or 1% of mono-alkyl ester(s) of linolenic acid, based on the total weight of mono-alkyl-esters of fatty acids in the composition."

III. The patent was opposed in its entirety on the grounds of Articles 100(a) EPC (lack of novelty and inventive step) and 100(b) EPC (insufficiency of the disclosure).

The following items of evidence were *inter alia* relied upon:

A1: US 6,455,763 B1;

A3: US 6,433,254 B1;

A11: Proceedings of the Estonian Academy of Sciences, Chemistry, Vol. 51 (2), pages 75-117, published 2002;

A11-82: M. Frauen, "*Breeding of High-Oleic-Acid Rapeseed (HOAR)*", from "*Plant Oils as Fuels: Present State of Science and Future Developments*", Proceedings of the Symposium held in Potsdam, Germany, from 16 to 18 February 1997, N. Martini et al., pages 240-245, published 1998;

- D7: Report for the International Energy Agency, Bioenergy Task 27 Liquid Biofuels, "Biodiesel - a Success Story", June 2001;
- D8: Internet article "Setting National Fuel Quality Standards, Paper 6: National Standard for Biodiesel - Discussion Paper", Department of the Environment and Heritage, Australian Federal Government, March 2003; and
- E4: Online library catalogue <http://Library.sl.nsw.gov.au/search/i?0642549087&searchscope=2>, indicating publication details for D8.

- IV. In the decision under appeal, the Opposition Division *inter alia* came to the following conclusions:
- The invention was sufficiently disclosed.
 - Documents D7 and D8, *inter alia*, were admitted into the proceedings.
 - The claimed subject-matter was novel, in particular over each of A1 and A3.
 - Document A11-82, which at least partly addressed the same objective of the patent in suit and shared most of the claimed technical features of its subject-matter, described the closest prior art for assessing inventive step, whereby the composition of line HO 117/3 in its Table 3 was the closest embodiment.
 - The composition of Claim 1 as granted was distinguished therefrom by a linolenic acid monoalkyl ester content of less than 4 wt%.
 - The claimed composition was not obvious over the closest prior art A11-82, even if compositions HOAR I and HOAR II illustrated in its Table 4 were considered, and even if the closest prior art was supplemented by any of D8 (considered to have been publicly available since March 2003, as evidenced by E4) or D7.

- V. With its statement setting out the grounds of appeal (dated 20 February 2015), the **Appellant** (Opponent) *inter alia* contested the findings of the Opposition Division by maintaining the objections of insufficient disclosure, as well as of lack of novelty and inventive step.
- VI. With its response (dated 25 August 2015) to the statement, the **Respondent** (Patent Proprietor) maintained as its Main Request the patent as granted but filed three sets of amended claims as its Auxiliary Requests I to III.
The Respondent essentially rebutted all of the objections raised by the Appellant.
- VII. With its communication dated 17 May 2018 in response to the summons to oral proceedings, the Respondent filed amended pages of the description for all three auxiliary claim requests on file, announced that it would not attend the scheduled oral proceedings, withdrew its request for oral proceedings and requested a decision on the basis of the file as it stood.
- VIII. In a communication issued in preparation for oral proceedings the Board indicated its preliminary opinion, in particular:
- that the feature "*Rapeseed alkyl-ester composition*" implied that the composition was obtained from rapeseed feedstock and was related to its oil composition, as well as that such a composition was inherently suitable for use as biodiesel;
- that the feature "*suitable for use as biodiesel*" indicated only the suitability of the composition for being used in the preparation of a biodiesel and did not impart any further limitation to the composition claimed;

- that the ground of opposition under Article 100(b) EPC (insufficiency of the disclosure) did not appear to prejudice maintenance of the patent;
- that the composition of Claim 1 as granted appeared to be known from A1 and A3, the rapeseed alkyl-ester compositions of which were inherently highly suitable for use as biodiesel;
- that document A11-82 (in particular its line HO117/3) was the closest prior art for assessing inventive step;
- that the technical problem was to be formulated according to the application as filed (paragraph [0013]), which did not rely on any improvement whatsoever over the state of the art;
- that for the skilled person starting from A11-82, under consideration of the particular trend shown in A11-82 itself and of the general trends shown by e.g. D8, was obvious to try a composition such as that of A3, i.e. one according to Claim 1 at issue;
- thus that the Main Request did not appear to be allowable;
- that the novelty objection should likewise be discussed with respect to the composition defined in Claim 1 of Auxiliary Request III; and,
- that inventive step of the use defined in Claim 1 according to Auxiliary Request II of the Biodiesel defined in Claim 1 according to Auxiliary Request I would have to be discussed in view of A11-82, taken alone, or in combination with any of D7, D8 or A11.

IX. With its reply dated 24 May 2018 to the communication of the Board, the Appellant

- requested to refuse the maintenance of the patent in suit in the amended form according to any of Auxiliary Requests I to III, because their objects lacked novelty and inventive step,

- agreed with the Board that A11-82 disclosed the closest prior art for assessing inventive step, and
- upheld its request for oral proceedings.

- X. With its reply dated 30 May 2018 to the communication of the Board, the Respondent
- confirmed that it would not attend the scheduled oral proceedings, as already announced by its letter of 17 May 2018;
 - withdrew its First Auxiliary Request, submitted amended Second and Third Auxiliary Requests, and filed a new, further auxiliary request as Fourth Auxiliary Request, all of the new claim requests allegedly focusing on use claims only;
 - requested a decision on the basis of the file as it stood; and
 - confirmed that its arguments on inventive step were essentially the same for all claim requests.

- XI. Claim 1 according to each of Auxiliary Requests II to IV, compared to Claim 1 as granted (Point II, *supra*), comprises the following amendments (made apparent by the Board):

Auxiliary Request II

"1. **Use of a r**Rapeseed alkyl-ester composition ~~suitable for use as biodiesel~~, comprising more than in the composition, **as biodiesel**."

Auxiliary Request III

"1. **Use of a r**Rapeseed alkyl-ester composition ~~suitable for use as biodiesel~~, comprising more than 72%, 75%,of mono-alkyl ester(s) of oleic acid, less

*than ~~4%, 3,5%, 3%, 2,5%~~.....of mono-alkyl ester(s) of linolenic acid..... in the composition, **as biodiesel.**"*

Auxiliary Request IV

*"1. **Use of a r**Rapeseed alkyl-ester composition ~~suitable for use as biodiesel~~, comprising more than ~~72%, 75%~~,of mono-alkyl ester(s) of oleic acid, less than ~~4%, 3,5%, 3%, 2,5%~~.....of mono-alkyl ester(s) of linolenic acid, **and less than 9% or 8% of mono-alkyl ester(s) of linoleic acid** in the composition, **as biodiesel.**"*

- XII. In its response (dated 31 May 2018) to the letter of the Respondent, the Appellant
- requested not to admit new Auxiliary Requests II to IV, nor the latest arguments and statements of the Respondent, as late filed and not justifiable as response to the Board's communication;
 - maintained that the objects of the amended claims lacked novelty and inventive step, and
 - upheld its request for oral proceedings.
- XIII. With its letter dated 11 June 2018, however, the Appellant
- announced that it too would not attend the scheduled oral proceedings;
 - withdrew its auxiliary request for oral proceedings; and
 - maintained all of its substantive requests.
- XIV. Oral proceedings were held on 19 June 2019 in the announced absence of Appellant and Respondent, pursuant to Rule 115(2) EPC.

XV. The **Appellant (Opponent)** had requested in writing that the decision under appeal be set aside and that the European patent be revoked.

The **Respondent (Patent Proprietor)** had requested in writing that the appeal be dismissed (Main Request), or auxiliarily that the patent be maintained in amended form on the basis of the claims of one of the Auxiliary Requests, titled II, III and IV in the given order, filed with letter dated 30 May 2018.

XVI. The arguments of the Appellant of relevance for the present decision can be summarised as follows:

Main Request

Construction of Claim 1

The claimed composition did not concern a plant variety nor an oil thereof, but a chemical composition, all components of which were commercially available before the priority date of the patent and could simply be mixed together. The composition might also be the product of a chemical reaction in which fatty acids, irrespective of their origin, were simply esterified. The feature "*rapeseed*" in Claim 1 at issue could thus not be considered to be technically limiting, let alone in respect of plant breeding and transgenic procedures.

Also the feature "*suitable for use as biodiesel*" had no technically limiting effect, let alone in respect of whatsoever absence of contaminants, not defined in Claim 1 at issue.

Lack of Novelty

Upon construction of Claim 1 in respect of the non-limiting features "*rapeseed*" and "*suitable for use as biodiesel*", the claimed composition lacked novelty over known rapeseed alkyl-esters compositions, as disclosed e.g. in any of A1 and A3.

Lack of inventive step

The subject-matter of Claim 1 lacked an inventive step *inter alia* over the disclosure of A11-82, taken as the closest prior art, in particular in view of therein suggested compositions HOAR I and II.

Also the teachings of D7 and D8 were relevant.

Auxiliary Requests II, III and IV

Amendments to Respondent's case

There was no justification whatsoever, not even in light of the Board's communication, to file these claim requests so late, especially after having requested a decision according to the state of the file. Hence, these claim requests and the latest arguments submitted by the Respondent should not be admitted.

Lack of Novelty and Inventive step

The objections of lack of novelty and inventive step put forward against the Main Request were maintained against the amended claims of the Auxiliary Requests.

XVII. The arguments of the Respondent of relevance for the present decision can be summarised as follows:

Main Request

Construction of Claim 1

The term "*rapeseed*" could not be ignored. Its meaning was clear and unambiguous, as apparent from the Wikipedia and from the prior art cited during prosecution, such as table 3 of D7, by the Appellant himself. The skilled person understood from the entire patent that the claimed alkyl ester composition was derived (by well known techniques such as transesterification) from native rapeseed oil. Hence, the term "*rapeseed*", meant that the ester composition was derived from native rapeseed oil, was limiting and excluded oils of different profile/source, such as sunflower oil. Indeed, it also implicitly defined the remaining fatty acids not explicitly listed.

The term "*suitable for use as biodiesel*" meant that

- the ester composition claimed comprised esters of fatty acids, not the triglycerides of an oil composition, as well as that
- the ester composition, to be suitable for use as biodiesel, needed to comply with strict quality requirements as to residual trace of glycerides/contaminants.

This term was in fact introduced to differentiate the ester composition produced for analytical purposes from the one produced for biodiesel purposes, as the patent dealt with a biodiesel composition, which needed to comply with defined specifications, and which was prepared by a process other than the FAME generation for GC purposes.

Novelty

The claimed subject-matter was novel over the invoked prior art, in particular over A1 and A3, for the following reasons:

Even though A1 and A3 disclosed some rapeseed lines having a fatty acid composition in accordance with Claim 1 at issue, these documents neither disclosed nor suggested their use in biodiesel applications.

Therefore, the claimed subject-matter was novel also over A1 and A3.

Inventive step

The claimed subject-matter was not obvious for the skilled person starting from A11-82 as closest prior art.

- In particular, according to A11-82, the development of the lines of Table 3, including HO 117/3, was not pursued because it was disappointing, and the efforts were concentrated on the lines shown in Table 4 thereof. There was no evidence that e.g. line HO 117/3 had actually been deposited under the Budapest Treaty. The mentioned rapeseed line might simply be a laboratory species, if at all, not necessarily an agronomically viable line for biodiesel production. It was therefore doubtful whether these lines were to be considered as disclosed. Hence, it was doubted that A11-82, Table 3, was a good starting point for assessing inventive step.

- However, even if it was considered therefor, for argument's sake, then one still had to show that the skilled person would actually have sought to reduce the linolenic acid content to below 4% to obtain an

improved oil composition suitable for biodiesel production. Nothing was said in A11-82 about the characteristics of HO 117/3 in biodiesel applications and hence nothing could be concluded on whether further improvement was actually required, and if so, how to further improve it. Moreover, the disclosed allegedly improved lines of Table 4 were nothing but speculative, as admitted in the decision. In addition, the speculative oil profile of HOAR I of Table 4 contained too high an amount of linoleic acid, another poly unsaturated fatty acid (PUFA) which impacted on stability/performance. Also, a reduction of the linolenic acid content from 7.1% to less than 4% in rapeseed plants required a whole research project in order to find a new equilibrium between all individual components of the oil composition. The Patent had found that equilibrium by reducing linolenic and linoleic acid content, and saturates content, while increasing oleic acid content. Finally, A11-82 was not just limited to biodiesel applications.

- Summing up, it was important to find the right balance between all constituents of the oil to reach the aim of using it as biodiesel. This implied the development of new lines, which required a major development effort. Hence, even if the skilled person seeking to find a proper biodiesel composition could have tried to increase oleic acid content, he would not have necessarily solved the problem of providing an agricultural acceptable, stable, and performing line suitable for biodiesel production.

Therefore, even assuming for argument's sake that further improvement was understood to be required, there was no particular reason why the person skilled in the art would have turned to Table 4 of A11-82.

In fact, 4 years after article A11-82, A11 still did not bring more information or confirmed the speculative data of A11-82 concerning the rapeseed lines of Table 4.

- Document D8 merely underlined the trade-off between desired and undesired properties. It pointed towards the use, as biodiesel, of oilseed rape varieties having either high oleic content (HO) of more than 80% or low linolenic acid content (LL) of less than 4%, without, however, suggesting the combination of both these requirements in the same variety. The passages of D8 did not even take into consideration low content of saturated fatty acids. Indeed, D8 rather pointed towards high levels of saturates for stability reasons. Nor gave it any guidance as to how to direct breeding efforts in order to improve biodiesel produced from rapeseed oil. D8 did not disclose any particular fatty acid profile but just suggested to "breed branched chains into the vegetable oil fatty acids" in order to improve the cold temperature behavior of Biodiesel, without giving any guidance on how such amended fatty acid profile would impact the performance of rapeseed fatty acid methyl esters and the compliance with most recent standards.

- The cited passages of D7 were not relevant either, as they did nothing more than expressing a wish or aim to be achieved without disclosing the means to get there.

- The claimed subject-matter thus involved an inventive step.

Auxiliary Requests II to IV

Amendments to Respondent's case

Auxiliary Requests II to IV were filed in response to the preliminary opinion of the Board. New Auxiliary Requests II and III were amendments of the previous Auxiliary Requests II and III, whilst Auxiliary Request IV was a newly added claim request. All claim requests focused only on use claims and contained restricted ranges of oleic and linolenic acids contents, and, in Auxiliary Request IV, also of linoleic acid, which amendment was supported by Claim 3 as granted.

Inventive step

The arguments on inventive step were essentially the same put forward with respect to the Main Request.

Reasons for the Decision

Procedural aspects

Admissibility of D7 and D8

1. Documents D7 and D8 were admitted by the Opposition Division into the proceedings (reasons, point 2). Their admission and their belonging to the state of the art was no longer contested by the Respondent. The Board has thus no reason to take another stance.

Main Request

Construction of Claim 1

2. The composition of Claim 1 at issue is *inter alia* defined by the following features,
- "Rapeseed alkyl-ester composition",

- *"suitable for use as biodiesel",*
- *"comprising more than 72% .. of monoalkyl ester(s) of oleic acid",*
- *"... less than 7% ...of mono-alkyl ester(s) of saturated fatty acids, and less than 4% ... of mono-alkyl-ester(s) of linolenic acid, based on the total weight of mono-alkyl ester(s) of fatty acids in the composition".*

The construction of Claim 1 in view of these features is in dispute between the parties.

The position of the Board is as follows:

- 2.1 For the Board, Claim 1 uses terms of art (as apparent from e.g. D8 - page 13, second paragraph, mentioning "Rapeseed Methyl Ester (RME)" - and D7 - page 17, first paragraph), which thus impart a clear, albeit generic, technical teaching to the skilled reader.
In particular, the terms *"Rapeseed alkyl-ester composition"* and *"suitable for use as biodiesel"* appear to be clear per se, as apparent from the items of common general knowledge invoked, such as D7 and D8. These terms however are generic, i.e. are not so specific such as to define a specific rapeseed (variety), its specific fatty acid profile, a specific composition obtained therefrom, let alone a commercial biodiesel obtained thereby.
- 2.2 More particularly, for the Board, the skilled person reading the term *"Rapeseed alkyl-ester composition"* in the context of Claim 1 at issue understands it to mean that the claimed composition is obtained by a "rapeseed" feedstock or is related to its oil components.
- 2.3 Thus, the at least necessary relation to the feedstocks "rapeseed", and the common general knowledge on the

processes for their transesterification (i.e. such that all glycerides present will be transesterified when reacting with e.g. methanol), excludes literal constructions based on the expressions "more than" and "less than", taken to the alleged possible limits of respectively 100% and 0%, and leading to a composition only consisting of oleic acid alkyl ester.

- 2.4 The feature "*suitable for use as biodiesel*" too is clear per se to the skilled person, in so far as it appears to be generally known,
- (from D7, page 17, first paragraph) that "by nature the 00-rapeseed breeds offer a fatty acid profile, which is highly suitable for Biodiesel", and
 - (from D8, page 13, fourth paragraph) that Biodiesel is defined in Standards as "a fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils ...".
- 2.5 It is thus apparent that the features "*Rapeseed alkyl-ester composition*" and "*suitable for use as biodiesel*" are interrelated, not independent, in so far as such a rapeseed composition per se is generally known to be highly suitable for use as biodiesel.
- 2.6 Of course, as the term "*biodiesel*" in Claim 1 at issue is only generically defined, a distinction has to be drawn between the natural suitability of a rapeseed alkyl-ester composition as such towards its use as biodiesel (i.e. what is defined in Claim 1) and its actual use as a commercial biodiesel obtained therefrom (which does not appear to be defined in Claim 1). In fact, only commercial biodiesel have to respect the standardized contents of contaminants (as taught also in the patent in suit, paragraphs [0098]-[0099]). Thus, the feature "*suitable for use as biodiesel*" indicates,

for the Board, only the suitability of the composition for being used in the preparation of a biodiesel, and does not impart any further limitation to a claimed composition which per se is generally known to be suitable therefor.

- 2.7 This construction of Claim 1 at issue is for the Board in line with the description of the patent in suit, with the common general knowledge and with the disclosure of the items of prior art invoked.

Novelty

3. For lack of novelty to be proven it is necessary to show a direct, or at least implicit, but unambiguous disclosure of all of the features of the claim at issue in combination, which as such can be gathered by the skilled person reading the disclosure. As already anticipated in the Board's communication, the position on novelty is as follows:
- 3.1 A1 (Brief summary of the invention) concerns a *Brassica napus oleifera annua* variety, an agronomically superior high oleic canola variety having a unique fatty acid profile, designated "S010", and also known as "Nex710", the seeds of which have been deposited with the ATTC (Claim 1).
- 3.1.1 According to A1 (column 4, point 8.2, and table 9, in column 14, line 15 ff) the fatty acid profile of its oil is determined by extracting a sample of oil from the seeds, by producing the methyl esters of fatty acids present in that oil sample and by analyzing the proportions of the various fatty acids in the sample using gas chromatography. The inevitable result of this process is a rapeseed alkyl-ester composition (RME). On

the basis of such a process/methyl ester composition, the oil profiles of some samples are characterised.

- 3.1.2 One of the profiles disclosed in A1 (table 9, Column 14, Point 8.2 ff) shows an oleic content of 76.2%, together with 6.3% of saturated fatty acids and 3.3% of linolenic fatty acids.
- 3.1.3 Hence, A1 directly and unambiguously discloses a rapeseed methyl ester composition comprising
- more than 75% of methyl ester of oleic acid,
 - less than 7%, even of 6.5%, of methyl esters of saturated fatty acids, and
 - less than 4%, even than 3.5%, of methyl ester of linolenic acids.
- 3.2 Likewise, A3 (Brief summary of the invention) concerns a *Brassica napus oleifera annua* variety, an agronomically superior high oleic canola variety having a unique fatty acid profile, designated "Nex705", the seeds of which have been deposited with the ATTC (Claim 1).
- 3.2.1 According to A3 (column 4, point 8.2, table 8, S007 1998, and table 9, in column 13, line 15 ff) the fatty acid profile of these oils is determined by extracting samples of oil from the seeds, by producing the methyl esters of fatty acids present in those oil samples and by analyzing the proportions of the various fatty acids in the samples using gas chromatography. On the basis of such process/methyl ester compositions, the oil profiles of some samples are characterised.
- 3.2.2 The lines S007 1998 (table 8) and Nex 705 (S007) (Table 9, Column 13, Point 8.2 ff) show an oleic content of, respectively, 76.86 or 75.6%, together with 6.34 or

6.4% of saturated fatty acids and 1.96 or 2.2% of linolenic fatty acids.

3.2.3 Hence, A3 too directly and unambiguously discloses two rapeseed methyl ester compositions comprising

- more than 75% of methyl ester of oleic acid,
- less than 7%, even of 6.5%, of methyl esters of saturated fatty acids, and
- less than 4%, even than 2.5%, of methyl ester of linolenic acids.

3.3 A1 and A3 do not mention any possible use of these compositions other than for the purpose of analysis of the fatty acids profile.

3.3.1 However, the skilled person reading A1 and A3 with common general knowledge (as disclosed e.g. in D7, page 17, first paragraph) implicitly and unambiguously gathers therefrom that the (first) methyl ester composition obtained from the high oleic variety of canola illustrated in A1 (column 14, table 9, line 15 ff) and the methyl ester compositions obtained from the high oleic variety of canola illustrated in A3 (tables 8 and 9) are by their nature highly suitable for use as biodiesel.

3.4 Thus, the Board concludes that the composition of Claim 1 at issue lacks novelty over the respectively cited methyl ester compositions of A1 and A3.

3.5 Consequently, the Main Request is not allowable, as the ground of opposition under Article 100(a) EPC (lack of novelty) prejudices maintenance of the patent as granted.

Auxiliary Requests II and III

4. Claim 1 of Auxiliary Request II concerns the use as biodiesel of the composition of Claim 1 according to the Main request, whilst Claim 1 of Auxiliary Request III concerns the use of a composition according to Claim 1 of the Main request, which is further limited in respect of the oleic and linolenic acid contents (see Point XI, *supra*).

Admissibility into the proceedings

5. Auxiliary Request II is identical to Auxiliary Request II filed with the statement setting out the grounds apart from the deletion of all process of preparation claims. As the deletion of said process claims do not raise issues not dealt with before, the Board sees no reason not to admit Auxiliary Request II into the proceedings (Article 13(1)(3) RPBA).
- 5.1 Auxiliary Request III corresponds to Auxiliary Request III filed with the statement setting out the grounds, apart from the change of claim category (from a rapeseed alkyl-ester composition suitable for use as biodiesel to the use of said rapeseed alkyl-ester composition as biodiesel) and the deletion of all process of preparation claims.

This change of category of Claim 1 can be considered to be a response to the Board's communication, in particular to the Board's preliminary opinion concerning the interpretation of the term "*suitable for use as biodiesel*" in previous claim 1.

Moreover, the amendments carried out in this request do not raise issues not dealt with before. The Board thus

sees no reason not to admit Auxiliary Request III into the proceedings (Article 13(1)(3) RPBA).

5.2 Hence, the Board used its discretion to admit both Auxiliary Requests II and III into the proceedings.

Amendments

6. As these claim requests fail because their subject-matter lacks an inventive step (*infra*), the Board need not make a detailed decision on the formal allowability of the amendments.

Novelty

7. The Appellant, in its letter dated 31 May 2018 (page 2, first full paragraph), has merely alleged that the claimed subject-matter of Auxiliary Requests II and III *inter alia* lacks novelty, without detailing however its objections. Hence, it is not apparent if and on which basis novelty is attacked.

7.1 For the Board none of A1 and A3 discloses the claimed use.

7.2 However, as Auxiliary Requests II and III fail, because their subject-matters lack an inventive step (*infra*), the Board need not make a detailed decision on novelty.

Inventive step

The invention

8. The present invention relates to the use of a new rapeseed alkyl ester composition as biodiesel (paragraph [0001]).

The closest prior art

9. In the decision under appeal, document A11-82 was considered to represent the closest prior art. Considering that the objective/problem addressed by A11-82 (e.g. first page, first paragraph: "The breeding programme of high-oleic acid rapeseed (HOAR) was started at ... almost ten years ago. The idea was to improve the quality of rapeseed oil for ... oleo-chemical applications. Recently we have learnt that this new quality will also improve the Biodiesel fuel for diesel engines because this new rapeseed oil will have a lower iodine number and, therefore, result in a better RME-product") is definitely that of providing an advantageous rapeseed line which presents technical properties at least in part similar to those mentioned in the patent in suit (see paragraphs [0013], [0104] and [0105]), the Board has no reason to take a different stance on this issue.

9.1 The arguments of the Respondent against the choice of A11-82 as the closest prior art are not convincing, for at least the following reasons:

- Claim 1 according to Auxiliary Requests II and III do not contain any limitation on the content of linoleic acid, so that the allegedly necessary co-limitation of linoleic acid cannot play any role;
- A11-82 is a public disclosure of rapeseed lines, which has not been disputed as such and is confirmed by A11 (paragraph bridging pages 80 and 81), a document published 4 years later, wherein A11-82 is cited as reference;
- whether line HO 117/3 had been deposited or not under the Budapest Treaty has no bearing on the decision, which relies on the disclosure that a line having a

profile/constituents as illustrated in Table 3, albeit having a better profile, e.g. in terms of oleic acid, than the Caracas used in the comparative examples of the patent, is nevertheless held to be disappointing, and in need of targeted modifications (increase of oleic acid and reduction of linolenics), i.e. in line with what is addressed in the patent and defined in Claim 1 at issue.

- 9.2 Therefore, for the Board, line HO 117/3, as disclosed in A11-82, is the best starting point for the evaluation of inventive step. This was already indicated in the Board's communication.

The technical problem

10. According to the original formulation of the technical problem given in the application as filed (paragraph [0013],
"The present invention is based on the discovery that the transesterification of rapeseed oil showing low, or even very low, saturated fatty acids content may nevertheless be advantageous, particularly when said oil composition shows high or very high oleic acid content and low or very low linolenic acid content", can be understood only as the provision of a generically advantageous rapeseed alkyl ester composition.

None of the prior art relevant from the present decision, such as A11-82, A3, D7 and D8, or A11, was acknowledged in the application as filed, so that no problem was originally formulated over any of said documents.

- 10.1 It has not been shown by the Appellant that such a problem has not been solved nor that inappropriate prior art were used to define the problem.
- 10.2 Nor has any improvement, e.g. over A11-82, ever been proven by the Respondent.
- 10.2.1 The examples of the patent in suit concern in fact two specific lines, MSP05 and MSP11, and their oils, the properties of which are compared with a Caracas variety, the composition of which (e.g. table VIII) however clearly contains e.g. less oleic acid and more linolenics than line HO 117/3 of A11-82. Hence, the comparative examples in the patent in suit cannot corroborate an improvement across the whole breadth of Claim 1 at issue.
- 10.2.2 Thus, it has not been shown that any improvement whatsoever is effectively achieved over A11-82 (HO 117/3), let alone across the whole breadth of Claim 1 at issue.
- 10.2.3 Consequently, the technical problem underlying the claimed invention can only be formulated as the provision of the further use as biodiesel of an advantageous alkyl-ester rapeseed composition.

The solution

11. The patent in its amended form, according to Auxiliary Request II or III, proposes a use as defined in Claim 1 thereof, respectively, which is characterized by a rapeseed oil profile with low saturated fatty acids content (less than 7 wt.%), and with high (more than 72 wt.%) or very high oleic acid content (more than 75 wt.%) and low or very low linolenic acid contents (less

than 4 or less than 2.5 wt.%). It is noted, in particular, that the solution defined in the respective Claim 1 does not limit in any way the content of linoleic acid.

Obviousness

12. It remains to be decided whether the skilled person, starting from the closest prior art and faced with the technical problem posed, would have used an alkyl-ester composition having a profile as defined in Claim 1 according to Auxiliary Request II and III, as biodiesel.

12.1 A11-82 taken alone

12.1.1 It was known from the disclosure of A11-82 that alkyl-ester rapeseed compositions, such as rapeseed line HO 117/3, were still disappointing in the preparation of biodiesel of lower iodine number. Therefore, the skilled person wishing to provide a further, advantageous, alkyl-ester composition for that use, would have been motivated by A11-82 itself to try the use of alkyl-ester rapeseed compositions, such as lines HOAR I and HOAR II (e.g. from the trends for these lines apparent from Table 4), having increased levels of oleic acid and decreased levels of linolenics, if or once the compositions were (to become) available, in the expectation of a successful reduction of the iodine number. Hence, the skilled person would have expected that such lines or lines with a similar profile are advantageous alkyl-ester rapeseed compositions which can be used as biodiesel.

12.2 A11-82 in combination with common general knowledge and/or A3

12.3 D7 and D8, respectively concerning the publication of a study (D7) (the only composition disclosed by which is the one on its table 3, i.e. a generic 00-rapeseed line) or a publication (D8) aiming at informing the stakeholders on standards for biodiesel (see point 1.1, first sentence), disclose general trends in the field of biodiesel production. Therefore, their contents would have been considered by the skilled person in the search for advantageous alkyl-ester rapeseed compositions to be used as biodiesel.

12.4 The Board remarks, in particular, that the motivation originating from A11-82 itself (12.1.1, *supra*) was not isolated, but is reinforced by the items of common general knowledge such as D7 and D8, or even A11. In this respect:

- D7 (page 14, last paragraph) generally suggests that the level of saturated fatty acids should not be increased, and that all corresponding rapeseed lines are highly suitable for use in the preparation of biodiesel.
- D8 generally shows how the different components of the alkyl-ester composition have to be balanced in order to attain advantageous biodiesel. In its point 6.11, D8 explains why, at least in Europe, a reduction of the linolenics is desirable. On page 97, it discloses that new oilseeds variety of improved fatty acids profile (>80% oleic acid and <4% linolenics) are available, and confirms that their use leads to quality improvement in the biodiesel.
- A11 (page 90, fifth paragraph under table 21, third sentence) hints at using high-oleic rapeseed oil with oleic acid content higher than 80%, with reference to A11-82, e.g. on the paragraph bridging pages 80 and 81 ("Nowadays the oleic acid level of 90% has been reached

at the expense of linolenic acid and linoleic acid, whose concentration has been reduced from 10% to 2% and from 22.0% to 2.0% respectively. This oil is a relatively suitable feedstock for BDF. Today also hybrid varieties are being developed with 15% to 20% more yield than the check varieties [82].").

- 12.4.1 Most importantly, at least A3 (3.2.1, *supra*) discloses a high-oleic-acid, low-linolenic-acid rapeseed oil, as hinted at in A11-82, A11 and D8. Hence it provides an available option enabling the skilled person to follow the generic suggestions of such documents, permitting to directly arrive at the claimed subject-matter.
- 12.4.2 Thus, for the Board, there was a general trend towards reducing the saturates and the linolenics whilst increasing the oleic acid content, which motivated the skilled person at using, instead of a composition such as that of line HO 117/3, mentioned by A11-82, the available composition known from e.g. A3, the acids profile of which complies with that defined in Claim 1 at issue.
- 12.5 Summing up, for the Board, the skilled person
- starting from the known, allegedly disappointing, use of a rapeseed alkyl-ester line such as HO117/3 in the preparation of biodiesel,
 - facing the technical problem to be solved, and
 - considering the particular trends shown in A11-82 itself, or the general trends towards a reduction of linolenics and an increase of the oleic acid in e.g. D8 and A11,
 - looking for known, available rapeseed lines which are similar to the lines HOAR I and II mentioned in A11-82, or as suggested in D8 or A11,

would have obviously wanted to try the use of an advantageous line with reduced content of linolenics and higher content of oleic acid, already available, according to D8 (and A11), or known from A3, in the expectation of the success (lower iodine number) foreseen in A11-82, and also in D8.

12.5.1 Therefore, the use of the composition defined in Claim 1 according to each of Auxiliary Requests II and III was obvious and does not involve an inventive step (Articles 52(1) and 56 EPC).

12.6 Auxiliary Requests II and III are thus not allowable.

Auxiliary Request IV

Admittance into the proceedings

13. Auxiliary Request IV has been submitted 20 days before the scheduled oral proceedings, i.e. late, allegedly in reaction to the Board's communication. No justification whatsoever has been provided for this late filing, let alone any arguments in support of the importance of the added feature.

13.1 Claim 1 of Auxiliary Request IV (Point XI, *supra*) concerns the use of a rapeseed alkyl-ester composition, which, compared to that of Claim 1 according to Auxiliary Request III, *inter alia* comprises less than 9% or 8% of monoalkyl ester(s) of linoleic acid. The content of linoleic acid, albeit mentioned in the decision under appeal, was not a feature in any of the previous claim requests and has not been discussed by the parties on the basis of the cited documents.

- 13.2 The basis for the specific limitations at once of the contents of oleic, linolenic and linoleic acids (i.e. in three lists of amounts for different components) has generically been acknowledged in Claim 3 as granted, which however was broader in these respects. However, the impact of the new combination of features on the closest prior art, the problem solved and obviousness has not been argued at all.
- 13.3 The other party and the Board are thus left in a position to examine on their own motion new issues raised by this claim request, or to continue the proceedings in writing.
14. As Auxiliary Request IV is unjustifiably late filed and raises new issues which cannot be dealt with at the oral proceedings in the absence of the parties, the Board decided not to admit Auxiliary Request IV into the proceedings (Articles 13(1)(3) RPBA).

Conclusion

15. The ground of opposition under Article 100(a) (lack of novelty) prejudices maintenance of the patent as granted. Auxiliary Requests II and III are not allowable, as their subject-matter lacks an inventive step. Late filed Auxiliary Requests IV is not admitted into the proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



D. Magliano

L. Li Voti

Decision electronically authenticated