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Datasheet for the decision of 28 April 2025

Case Number: T 1194/23 - 3.3.09

Application Number: 14816607.7

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Language of the proceedings: EN

Title of invention:
PROCESSES FOR PRODUCING DARK RED AND DARK BROWN NATURAL COCOA

Patent Proprietor:
Olam International Limited

Opponent:
Barry Callebaut AG

Headword:
Natural chocolate/OLAM

Relevant legal provisions:
EPC Art. 54(2), 56, 123(2)

Keyword:
Main request and auxiliary request 1: novelty - (no)
Auxiliary request 2: novelty and inventive step - (yes); added subject-matter - (no)

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Case Number: T 1194/23 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 28 April 2025

Appellant: (Opponent)	Barry Callebaut AG Hardturmstrasse 181 8005 Zürich (CH)
Representative:	LLR 2, rue Jean Lantier 75001 Paris (FR)
Respondent: (Patent Proprietor)	Olam International Limited 7 Straits View Marina One East Tower No. 20-01 Singapore 018936 (SG)
Representative:	dompatent von Kreisler Selting Werner - Partnerschaft von Patent- und Rechtsanwälten mbB Deichmannhaus am Dom Bahnhofsvorplatz 1 50667 Köln (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 24 April 2023 concerning maintenance of the European Patent No. 3013153 in amended form.**

Composition of the Board:

Chairman	G. Decker
Members:	A. Veronese
	M. Ansorge

Summary of Facts and Submissions

I. The appeal was filed by the opponent (appellant) against the opposition division's interlocutory decision finding that the European patent as amended according to the main request filed on 4 January 2022 met the requirements of the EPC.

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

III. Claims 1 and 9 of the main request read as follows:

"1. *A process for producing a dark, natural cocoa, comprising in this order:*
mixing a cocoa product selected from the group consisting of cocoa nibs, cocoa beans, and a combination thereof with water;
heating the cocoa product and the water to a temperature of at least 85°C, wherein a moisture content of the cocoa product after heating is from 35 to 40 %;
drying the cocoa product; and
grinding the cocoa product, thus producing cocoa liquor;
wherein the cocoa product is not alkalized during said process."

"9. *A natural, cocoa product obtainable according to the method of claims 1-8 comprising:*
color coordinates according to CIE 1976 color standards of an L-value of between about 9 and about 21, a

C-value of between about 14 and about 29, and an H-value of between about 40 and about 57; and a pH of less than about 6."

IV. The documents submitted during the opposition proceedings included:

D2: US 2012/0027889 A1
D3: WO 2012/139096 A1

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

- The product of claim 9 was novel over the products of D3. The products of D3, in contrast to the claimed product, did not qualify as "natural", a term which excluded products treated with alkali, acids or enzymes.

- The method of claim 1 and the product of claim 9 involved an inventive step starting from D2, the closest prior art. The claimed method differed from that of D2 in the heating conditions. The claimed product differed from that of D2 in that it was natural and in the pH. The problem underlying claim 1 was the provision of a process for obtaining a dark cocoa product avoiding enzymatic treatments and alkalinisation. The prior art did not give any incentive to carry out the claimed heating step. This was incompatible with the enzyme treatment of D2. For similar reasons, the prior art did not hint in any way at providing a product having the pH as in claim 9. The same conclusions were arrived at starting from D3.

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

D9: "Cacao et Chocolat. Production, utilisation, caracteristiques", ed. Lavoisier, Collection Sciences & Techniques Agroalimentaires, 1998, 1-4, 177-178, 315-318

D10: "The De Zaan Cocoa Manual", 2006, 1-2, 143

D12: Malaysian Standard: MS 871: 1984; UDC 663.914 (083.75) (540), Specification for Malaysian Cocoa Powders

VII. With its reply to the statement setting out the grounds of appeal, the respondent filed:

D13: Printout from the internet site of the European Food Safety Authority on food enzyme: https:// www.efsa.europa.eu/en/topics/topic/food-enzymes

VIII. In its reply to the statement setting out the grounds of appeal, the respondent relied on the main request found allowable by the opposition division and, additionally, auxiliary requests I and II, filed during the opposition proceedings with the letter dated 13 December 2022.

IX. Auxiliary request I differs from the main request in that claim 9 was amended to read (omissions are struck through and additions are underlined):

"*9. A natural, cocoa product obtainable according to the method of claims 1-8 comprising:*

color coordinates according to CIE 1976 color standards of an L-value of between ~~about 9 and about 21~~ any ranges encompassed by the numbers 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, and 9, a C-value of

between about 14 and about 29, and an H-value of between about 40 and about 57; and

a pH of less than about 6".

X. Auxiliary request II differs from the main request in that product claim 9 and the following dependent product claims have been deleted.

XI. After receiving the preliminary opinion issued by the board in preparation for the oral proceedings, with a letter dated 3 March 2025, the respondent filed:

D14: F. Kuchler et al., "The Prevalence of the 'Natural' Claim on Food Product Packaging", US Department of Agriculture, Number 35, 2006

D15: Food Standards and Labelling Policy Book, The United States Department of Agriculture, 2005

XII. With their letters dated 14 March 2025, both parties informed the board that they did not request oral proceedings if a decision was issued finding auxiliary request II allowable. The respondent clarified that it requested that oral proceedings be held only if none of its requests (main request and auxiliary requests I and II) was considered allowable by the board. It also stated that it assumed that the board would remit the case to the opposition division for adaptation of the description.

XIII. Subsequently, the board cancelled the date for oral proceedings.

XIV. The relevant arguments submitted by the parties during the proceedings are reflected in the reasons for the decision below.

Requests

XV. The opponent (appellant) requested that the decision under appeal be set aside and that the patent be revoked in its entirety.

XVI. The patent proprietor (respondent) requested that the appeal be dismissed or, alternatively, that the patent be maintained on the basis of one of auxiliary requests I or II, filed with the letter dated 13 December 2022.

Reasons for the Decision

Main Request

1. *Novelty*

"Natural cocoa products"

1.1 An important point in dispute for assessing novelty is the meaning of the wording "natural cocoa products" or "natural cocoa" used in the claims.

1.2 The board agrees with the appellant that, according to common language, the term "natural" is used to identify something existing in, or derived from, nature, rather than something made or caused by humankind.

1.3 According to the respondent, the expression "natural cocoa products" excluded all products which have been subjected to alkaline, acid or enzyme treatments.

1.4 What needs to be decided is whether in the relevant field at the relevant date the expression "natural

cocoa products" was associated with a particular type of cocoa products. In other words, it must be decided whether in the field of cocoa products the above expression had a meaning differing from that used in common language.

1.5 Both parties and the opposition division agreed that in that field, the expression "natural cocoa products" defined products which have not been subjected to an alkali treatment.

1.6 The patent states that cocoa products which have been subjected to an alkalising process to produce a darker colour cannot be considered natural and are often labelled as "processed with alkali". Furthermore, it states that there is a growing need for cocoa products which have the colour of alkalinised cocoa products and yet can be considered natural (see paragraphs [0006] and [0011]).

1.7 This interpretation is confirmed by several documents representing the common general knowledge in the field before the relevant date. Reference is made to the extracts from the handbooks D9 (page 318, second paragraph "Glaces au chocolat") and D10 (page 143, section "pH") and to an industrial reference standard, D12 (the "Malaysian Standard", page 5, point 3.6). This interpretation is also in accordance with the teaching of D2, paragraph [0048].

1.8 Consequently, the description of the patent and D9, D10 and D12 make it credible that in the field of chocolate products, at the relevant date, the term "natural" was used to identify products which have not been subjected to an alkaline treatment. Accordingly, taking into account the available evidence and since both parties

agree on this point, the board acknowledges that the expression "natural cocoa product" defines a product which has not been subjected to an alkali treatment.

1.9 However, the board does not agree with the respondent that the expression "natural cocoa product" defines products which have not been subjected to an acid or enzymatic treatment. No convincing evidence has been provided that in the relevant field, at the relevant date, this expression had a commonly recognised meaning which goes beyond that discussed above. None of the aforementioned D9, D10 and D12 provides this evidence.

1.10 The respondent argued that paragraph [0048] of D2 and paragraph [0023] of D3 provided a definition of natural cocoa products. However, these documents are patent applications, which do not represent the common general knowledge at the relevant date. Furthermore, the cited paragraphs of D2 and D3 refer only in passing to "natural cocoa products" and do not provide a precise definition of this expression. Moreover, D2 teaches that the expression "natural cocoa" is often used to define a product having a brown colour with an L value greater than 19 (see paragraphs [0004] and [0043]). This means that D2 teaches that the expression "natural cocoa" is used to define a product having a particular quality - a certain colour - rather than a product obtained by a specific process which includes or excludes certain processing steps.

1.11 Referring to D13, issued by the European Food Safety Authority, the respondent argued that industrially produced enzymes, such as those used in D2, would be considered a possible health risk. In its opinion, this showed that products treated with enzymes would not qualify as natural.

1.12 This argument is not convincing because whether a food can be considered safe has no bearing on whether that food can be qualified as natural. A food could be unsafe even if of a natural origin.

1.13 The respondent also referred to D14 and D15. However, neither of these documents mentions any cocoa product, let alone what is intended by the expression "natural cocoa product". The passages on pages 53 and 116 of D15 mentioned by the respondent relate to steaks and solid pieces of meat and to other meat products such as poultry.

1.14 For these reasons, the board does not agree with the respondent that the expression "natural cocoa product" defines a product which has not been subjected to an acid or enzymatic treatment.

Novelty over D3

1.15 During the opposition proceedings, the appellant argued that the cocoa product of claim 9 was not novel over the cocoa product used for the "Start of the process" disclosed in the second row of table 13 on page 28 and over some of the products shown in table 14 of D3.

1.16 In its decision, the opposition division found that these cocoa products had the colour coordinates defined in claim 9 and a pH of 4.72, thus within the claimed range. However, it considered that any product having this pH was necessarily obtained by acidification and, as such, did not qualify as a natural product according to claim 1. It also argued that paragraph [0023] of D3 explicitly stated that the disclosed products were not natural products. For this reason, it found that the

product of claim 9 was novel because it defined a natural cocoa product.

1.17 The board agrees with the appellant that the opposition division finding was not correct.

1.18 In the first place, as noted by the appellant, natural cocoa products exist which have an acidic pH, without having been subjected to an acid treatment (see e.g. D9, page 318 describing a "Glace au Chocolat" as a non-alkalinised, natural cocoa product).

1.19 Furthermore, for the reasons presented above (points 1.9 to 1.14), the board agrees with the appellant that the expression "natural cocoa products" is not suitable for distinguishing the claimed products from those of tables 13 and 14 of D3.

1.20 This applies irrespectively of the fact, mentioned by the respondent, that paragraphs [0023] and [0151] of D3 refer to certain products shown in tables 11, 13 and 14 - which are not obtained by acidic treatment - as natural cacao products.

1.21 For these reasons, the product of claim 9 is not novel over the product of D3. Thus, the main request is not allowable.

1.22 In view of this finding, it is not necessary to deal with the other objections raised against claim 9 by the appellant, namely the objections of added subject-matter, lack of clarity and sufficiency of disclosure.

Auxiliary request I

2. *Novelty*

2.1 Claim 9 of auxiliary request I differs from claim 1 of the main request in that the L value is described as a series of possible ranges. However, one of these ranges is between 9 and 21, i.e. the range of claim 9 of the main request. Thus, the product of claim 9 lacks novelty over the products of D3 for the same reasons as discussed when dealing with the main request.

2.2 Thus, auxiliary request I is also not allowable.

Auxiliary request II

3. Auxiliary request II differs from the previously filed requests in that the product claims 9 to 14 have been deleted.

4. In view of this limitation, the objection of lack of novelty raised against product claim 9 of the main request is no longer applicable. Since the other objections raised against the main request, namely of added subject-matter, lack of clarity and sufficiency of disclosure, were only raised against claim 9 of the main request, they are no longer applicable either.

5. The board noted that the respondent did not explicitly deal with auxiliary request II in its reply to the appellant's statement of grounds of appeal. However, the respondent provided arguments as to why the process according to claim 1 of the main request was novel and inventive. This can be seen as a substantiation within the meaning of Article 12(3) RPBA of why also the

process according to claim 1 of auxiliary request II was novel and inventive.

6. *Inventive step*

The claimed invention

6.1 The claimed invention relates to a process for producing a cocoa product having the dark colour observed in cocoa products which have been subjected to an alkalinised treatment, without having been subjected to such treatment. Not having been subjected to an alkalinisation step, the resulting dark cocoa product can still qualify as "natural" for the consumer.

6.2 The claimed process involves a step of heating a cocoa product and water to at least 85°C so that the moisture content of the cocoa product after heating is from 35 to 40%. This heating step is followed by drying and grinding.

The closest prior art

6.3 The opposition division decided that D2 is the closest prior art because, like the claimed patent, it focuses on producing a cocoa product having a dark colour, without the need to change the pH of the cocoa, i.e. without the need for an alkalinisation step (see paragraphs [0002] to [0004], [0014], [0048]). The board does not have reasons to deviate from the choice of D2 as the closest prior art.

6.4 The process of D2 involves adding an enzyme mixture to a cocoa product in the presence of water, heating at a temperature of from 40 to 70°C for a time sufficient to

increase the reducing sugars and amino acids, and, possibly, roasting the mixture.

Distinguishing features

6.5 The process of claim 1 differs from that of D2 in that cocoa beans or nibs are treated at temperatures above 85°C to reach a 35-40% moisture content. The process of D2 involves heating at a lower temperature, from 40 to 70°C. Additionally, the process of claim 1 differs from that of D2 in that cocoa nibs or beans are treated. Cocoa cake or cocoa powder is used in the process of D2.

Technical effect and underlying technical problem

6.6 There is no evidence that the claimed process induces any technical effect beyond the teaching of D2.

6.7 For this reason, the underlying technical problem is the provision of an alternative process for producing a cocoa product having a dark colour without the need for alkalinisation. It was not disputed that the results in the patent provide convincing evidence that this problem has been solved by the claimed invention.

6.8 The opposition division and the respondent stated that the problem was also to avoid an enzymatic treatment step. However, this is not true because the claimed process does not exclude that step.

Non-obviousness of the claimed solution

6.9 As decided by the opposition division, when confronted with the underlying technical problem, the skilled person would not have considered raising the

temperature during the heating step above 70°C, the temperature specified in D2. D2 advocates using a lower temperature (see paragraphs [0014], [0016], [0033] and [0041]). This is also logical because, as noted by the opposition division, the skilled person would not have raised the temperature above that indicated in D2 to prevent the inactivation of the enzymes used to carry out the process.

6.10 D2 does not suggest adjusting the moisture of the heated product within the range of 35 to 40% either.

6.11 For these reasons, the claimed process involves an inventive step over D2.

D3 as an alternative starting point

6.12 The appellant argued that D3 could also be considered a starting point for assessing inventive step. D3 discloses a process for producing cocoa products with fruity flavours involving mixing cocoa nibs with an acid and water and roasting the acidified nibs. The primary aim of D3 is to induce fruity flavours. However, D3 also addresses the issue of obtaining products having specific colours, including bright, red or brown colours (see paragraph [0039] and claim 7).

6.13 When reading D3, it is readily apparent that the critical processing steps of the disclosed invention are the acidification of the nibs and the roasting of the acidified nibs to a very low moisture content, namely of around 1 to 2% (see examples 1 to 8, 10 and 13; paragraphs [0031]; claim 28). Thus, on reading D3, the skilled person would assume that roasting the acidified nibs to this moisture content was the

critical step for obtaining the desired fruity taste and colour.

6.14 As stated by the opposition division, the process of example 13, considered by the appellant the starting point during the opposition proceedings, involves heating cocoa nibs at 100 to 105°C, acidification and dropping the temperature within a range of 95 to 88°C to a moisture of 12.63 to 15.9%, followed by the roasting step, to obtain a moisture content of 1.6 to 1.9%.

6.15 The claimed process differs in that it involves heating the cocoa product and water to a temperature of at least 85°C to obtain a product containing 35 to 40% moisture.

6.16 Since there is no evidence that the claimed residual moisture is associated with any technical effect going beyond the teaching of D3, the underlying technical problem is the provision of an alternative process for preparing a dark cocoa product.

6.17 As stated by the opposition division, D3 does not provide any teaching to adjust the operating conditions to obtain the claimed moisture content of 35 to 40%. D3 is adamant in its teaching that roasting an acidic product to a much lower moisture content is critical to obtaining the purported effects.

6.18 In some examples according to D3, the product is subjected to a drying step at a low temperature, 50°C. However, also in this case the obtained product has a residual moisture content, around 3 to 5%, which is considerably lower than the claimed one of 35 to 40%.

6.19 The appellant also referred to the moisture content of 43.5 to 47.6% of certain intermediate compositions shown in table 1B. However, these moisture contents are of the nibs after washing with water, i.e. of the material which is then used as the starting material in the disclosed process. These moisture contents have no bearing on the processing steps relevant for imparting the relevant taste and colour of the final cocoa products. Thus, the argument that the skilled person would have considered producing products with a moisture content having any value within a range spanning from 1% (the minimum for the roasted products of D3) to 47.6% (the maximum for the washed nibs of D3) - and thus also within the claimed range - is tainted by hindsight and not convincing.

6.20 The appellant also referred to example 10 of D13 as the starting point and alternatively to example 13 referred to during the opposition proceedings. This is an amendment of the party's case under Article 12(4) and (6) RPBA. It is not apparent why the appellant did not raise this objection during the opposition proceedings. Thus, the objection based on this example is not to be admitted under Article 12(4) and (6) RPBA, as submitted by the respondent. Furthermore, even if this objection were admitted, the conclusions would be the same for the reasons set out above.

6.21 Consequently, also when using D3 as the starting point, the claimed invention involves an inventive step.

7. *Amendments of certain paragraphs of the description*

7.1 During the oral proceedings before the opposition division, the respondent filed an adapted description in which paragraphs [0014], [0022] and [0028] were

amended (see annex to the minutes of the oral proceedings, "version 2").

7.2 According to the appellant, the deletion of certain information on the colours and the pH of cocoa products in paragraphs [0014] and [0022] of the description created originally undisclosed subject-matter, contrary to the requirements of Article 123(2) EPC.

7.3 In its opinion, these paragraphs provided the definition of the "dark" colour and of the pH of the product to be obtained in the process of claim 1. Thus, owing to the deletions made, information was lost which could be used to interpret the claims.

7.4 The appellant's arguments are not convincing. The wording "dark, natural cocoa" in process claim 1 is not limited by the colour values mentioned in paragraphs [0014] and [0022] of the description. In particular, the board notes that:

- the wording "In a further embodiment..." in paragraph [0014] and "In another embodiment..." in paragraph [0022] of the patent as granted, as well as in the corresponding passages of the application as filed, and

- the context of amended paragraph [0022], i.e. the list of various embodiments described in paragraphs [0012] to [0025],

clearly indicate that the colour values specified in these paragraphs relate to particular embodiments and not to the only possible definition of the term "dark" in claim 1 of the application as filed and of the granted patent.

Consequently, the amendments made have no effect on the interpretation of the term "dark" used in the claims. The same applies as far as the definition of the pH has been amended in the aforementioned paragraphs of the description.

7.5 Thus, as decided by the opposition division, the deletion of parts of these paragraphs does not create originally undisclosed subject-matter.

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 with claims 1 to 8 according to auxiliary request II filed by letter dated 13 December 2022 and a description to be adapted if necessary.

The Registrar: The Chairman:

K. Götz-Wein G. Decker

Decision electronically authenticated