

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 15727-WO-PCT	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/EP2016/079264	International filing date ( <i>day/month/year</i> ) 30 November 2016 (30.11.2016)	Priority date ( <i>day/month/year</i> ) 30 November 2015 (30.11.2015)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant NESTEC S.A.			

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
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	Date of issuance of this report 05 June 2018 (05.06.2018)
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# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**  
(PCT Rule 43*bis*.1)

To:

see form PCT/ISA/220

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/EP2016/079264

International filing date (day/month/year)  
30.11.2016

Priority date (day/month/year)  
30.11.2015

International Patent Classification (IPC) or both national classification and IPC  
INV. A23G1/40 A23G3/42 A23G9/34

Applicant  
NESTEC S.A.

**1. This opinion contains indications relating to the following items:**

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



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Date of completion of this opinion

see form  
PCT/ISA/210

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of:
  - the international application in the language in which it was filed.
  - a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2.  This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3.  With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
  - a.  forming part of the international application as filed:
    - in the form of an Annex C/ST.25 text file.
    - on paper or in the form of an image file.
  - b.  furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
  - c.  furnished subsequent to the international filing date for the purposes of international search only:
    - in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
    - on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4.  In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	<u>2, 3, 5, 9-13</u>
	No: Claims	<u>1, 4, 6-8, 14, 15</u>
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-15</u>
Industrial applicability (IA)	Yes: Claims	<u>1-15</u>
	No: Claims	

2. Citations and explanations

see separate sheet

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

- D1 WO 2012/050439 A1 (FRIESLAND BRANDS BV [NL]; VAN DER VEGT ALBERT [NL]; BISSCHOP HENDRIK J) 19 April 2012 (2012-04-19)
- D2 US 2005/118327 A1 (BEST ERIC T [US] ET AL) 2 June 2005 (2005-06-02)
- D3 GB 1 219 996 A (NESTLE SA) 20 January 1971 (1971-01-20)
- D4 US 3 218 174 A (GIAN-FRANCO SCHUBIGER ET AL) 16 November 1965 (1965-11-16)
- D5 US 3 930 048 A (WOOKEY NORMAN ET AL) 30 December 1975 (1975-12-30)
- D6 ADHIKARI B ET AL: "Effect of addition of proteins on the production of amorphous sucrose powder through spray drying", JOURNAL OF FOOD ENGINEERING, BARKING, ESSEX, GB, vol. 94, no. 2, 1 September 2009 (2009-09-01), pages 144-153, XP026127127, ISSN: 0260-8774, DOI: 10.1016/J.JFOODENG.2009.01.029 [retrieved on 2009-02-05]
- D7 WO 2006/130698 A2 (HERSHEY CO [US]; HANSELMANN WILLIAM [US]) 7 December 2006 (2006-12-07)

**Remark:**

Claim 1 relates to a product defined by reference to a parameter: the closed porosity of the amorphous porous particles. It is difficult to compare what is set out in the present application with what is set out in the prior art.

It is true that documents D1 and D2 (disclosing both a similar amorphous porous particle) do not specifically disclose whether or not the amorphous sugar particle falls within the parameter specified in the claim. However, this does not automatically mean that the particle disclosed in documents D1 and D2 with its specific composition

and structure, does not fall within the scope of claim 1 and hence there is a novelty problem (see below). No evidence is available (f.i. comparative testing) to prove that there is a real difference.

### **Novelty**

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1, 4, 6, 7, 8, 14, 15 is not new in the sense of Article 33(2) PCT.

D1 discloses amorphous porous particles comprising sugar, a bulking agent and a surfactant, a food product comprising said amorphous porous particles, wherein the food product is a confectionery product (foamer, creamer, topping base, chocolate powder) (p.1, l.5-12; p.3, l.16-17; p.4, l.17-24; p.7, l.1-30; p.8, l.3-10; p.9, l.8-13).

D1 further discloses (p.2, l.21-31) the use of said amorphous porous sugar particles as a sugar replacer in a food product, in order to reduce the sugar content of a food product.

The subject-matter of claims 1, 4, 6-8, 14, 15 is therefore not new (Article 33(2) PCT).

D2 discloses (cited Japanese document in D2: par.15) amorphous porous particles comprising, sugar, a bulking agent (non-fat milk solids) and a surfactant (sodium caseinate), a food product comprising said amorphous porous particles, wherein said food product is a fat based confectionery product for example chocolate and a sweetener composition consisting of said amorphous porous particles.

D2 also discloses the use of said amorphous porous sugar particles as a bulk sugar replacer in a food product, said food product being a confectionery product.

The subject-matter of claims 1, 4, 6-8, 14, 15 is therefore not new (Article 33(2) PCT).

### **Inventive Step**

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 2, 3, 5, 9-13 does not involve an inventive step in the sense of Article 33(3) PCT.

D1 is regarded as being the prior art closest to the subject-matter of claim 9, and discloses (p.3, l.4-16; p.3, l.16-17; p.11, l.16-23) a process of making the amorphous porous particles comprising sugar, bulking agent and a surfactant, comprising the

steps of subjecting a mixture comprising sugar, bulking agent and surfactant to high pressure (p.11, l.20-21: "a gas i pressurized in a matrix of protein, carbohydrate and fat") adding gas to the mixture, spraying and drying the mixture to form amorphous porous particles.

The subject-matter of claim 9 therefore differs from this known method in that the particle size of the amorphous porous particles is further reduced and is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may therefore be regarded as the provision of amorphous particles of a finer particle size distribution.

The solution proposed in claim 9 of the present application cannot be considered to involve an inventive step (Article 33(3) PCT). A size reduction step is a trivial additional step in methods of particle formation and thus can be obtained by a skilled person in a simple routine work, without any inventive input.

Dependent claims 2, 3, 5, 10-13 contain features that can be obtained by a skilled person in a simple routine work, without any inventive input, depending on the properties of the product he wishes to have, with the simple knowledge of the field and thus do not involve an inventive step (Article 33(3) PCT).

### **Re Item VIII**

#### **Certain observations on the international application**

The application does not meet the requirements of Article 6 PCT, because claim 4 is not clear.

The term "refined" used in claim 4 is vague and unclear and leaves the reader in doubt as to the meaning of the technical feature to which it refers, thereby rendering the definition of the subject-matter of said claim unclear, Article 6 PCT.