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THIRD PARTY OBSERVATION

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PCT/EP2016/079264	30 Nov 2016 (30/11/2016)
Applicant	
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Third party observation submitted by	Observation submitted on behalf of
Anonymous	
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30 Mar 2018 (30/03/2018)	English

Basis and contents of observation

1. The observation is made on the basis of the claims in the international application as filed.
2. The observation comprises:
   References to documents: 1
   Uploaded copies of documents: 2
3. Further explanations:
   Uploaded copies of documents: 0

Citation # 1 (Patent/utility model) (# uploaded documents: 2):

Country code:	Publication number:	Document kind code:
WO	2015/049292	A1

Patent Applicant/Patent Owner:	Title of invention:
BÜHLER AG	SPHERICAL PARTICLE COMPRISING AMORPHOUSLY SOLIDIFIED BIOPOLYMER MATRIX, & PRODUCTION & USE THEREOF

Link to document:
https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2015049292

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Most relevant passages or drawings:	Relevant to Claims:
¶2, 4, 17-23, 28-32, 37-41, 47, 49, 56, 59-68, 71-72, 76-89, 95-104, 107-112, 121-126, 138, 143, 151, 155-162, 167, 170-173, 182-192, 195-201, 204-211, 223-237, 254, 257, 272-279, 281-287, 293-295	1-14

Brief explanation of relevance:

Corresponding US20160242432A1 is used herein as an English translation of the PCT application, WO 2015049292. US20160242432A1 (hereinafter C1) relates in general to spherical particles, food suspensions and consumable masses comprising spherical particles for use in food products. The spherical particles contain a matrix material composed of an amorphously solidified biopolymer.

Claim 1

C1 teaches a spherical particle for producing a food product, wherein the particle comprises a matrix material of amorphously solidified biopolymer. C1 further teaches that hollow space volume content (porosity), of the spherical particle agglomerate is less than 40% or less than 25%. (¶31-32, ¶71-72, ¶ 138, claims, 1, 26)

C1's biopolymer can be bulking agents such as a starch, proteins such as whey protein, sugar/

polysaccharide mixtures, polydextrose, maltodextrin, or combinations thereof. (¶23, 59, 98, 107)
C1 also teaches optionally adding emulsifier in the method of making spherical particles (¶80)
Also, C1 teaches lowering density by incorporating gas bubbles into the matrix material. (¶68, ¶138)
The gas bubbles in the particles will remain in the pores, only if the pores are closed.

Claim 2
C1 teaches spherical particles having the glass transition temperature of greater than 25 °C or preferably greater than 40 °C. (¶20, ¶28, ¶37-41, ¶47, ¶195-196, ¶223-235, Table 2, FIGS. 1a and 1b)

Claim 3
C1 teaches that, based on the volume, at least 30% of the spherical particles have a size of less than 500 µm, or 100 µm; or 50 µm; at least 60% have a diameter of between 2-40 µm, and 80% of the particles are larger than 1 µm. C1 also teaches D90 of less than 500 µm in claim 30. (¶56, ¶110-112, ¶ 197, ¶254, FIGS. 2a and 2b, claims 22, 30)

Claim 4
C1 teaches refining, i.e. reducing particle size by using comminution in impact or jet mills (dry grinding) and stirred ball mills. (¶17, ¶293-295)

Claim 5
C1 teaches compositions of spherical particles in examples 1-3, with sucrose present in an amount of at least 30 wt% and in example 2, the sucrose and skimmed milk are present in a weight ratio of 1.6:1 with 40.6 wt% of sucrose and 24.8 wt% of skimmed milk. (¶204-211, Table 1)

Claims 6-7
C1 relates to spherical particles, to food suspensions and consumable masses having spherical particles and to food products comprising a food suspension and/or a consumable mass. C1 further teaches that the consumable product can be a chocolate slab, a praline, a cake or baked goods having a chocolate filling or chocolate covering and/or chocolate coating, a bar or other product forms. (¶2, ¶4, ¶19-20, ¶95-104, ¶121-126, ¶143, ¶159-162, ¶170, ¶173, ¶182-189, ¶198-201, ¶281-282, ¶287, claims 1, 28-32, 37-38)

Claim 8
C1 teaches that the spherical particles are suspended in a fatty continuous fluid. Commonly used fats are cocoa buttery milk fat, cocoa butter substitutes, cocoa butter substitute fats, cocoa butter equivalents among other types of fats. (¶101, ¶126, ¶284-287, claim 31)

Claim 9-13
C1 teaches first forming a thoroughly homogenized biopolymer solution by dissolving sugar components, surface active substances, in an aqueous fluid phase. The biopolymer solution may also comprise milk, milk constituents, fruit juice, vegetable juice, coffee, coffee extracts, tea and/or tea extracts. The first step may be carried out in a temperature controlled mixing container. In the second step, solid particles and/or volumes of liquid and/or volumes of gas and optionally an emulsifier are added to the solution. In the third step, a pressure- and temperature-controlled spray drying of the aqueous mixture or dispersion of the second step is carried out followed by drying to form spherical particles. (¶76-89, ¶204-209, claim 27)
C1 also teaches that when the spherical, amorphously solidified composite particles according to the invention are used, it is found that the addition of lecithin, a typical emulsifier for chocolate, has the effect not of an improvement but rather of a significant deterioration in the flow properties. (¶167, ¶171-172, ¶190-192, FIGS. 4, 5a, and 5b, ¶199-200, ¶237, ¶257, ¶272-279)
The particles can be formed into tablets or sintered under a pressure of greater than 20 kPa, or 100 kPa or 300 kPa to convert into form of a food product, for example in slab or bar form. (¶155-158)
C1 teaches that the particle can have a density in the range of 0.1-2.5 g/cm3, with low density values obtainable by incorporating gas bubbles or foam into the matrix material. (¶68, ¶138)

C1 can achieve low density values only if the hollow space of the spherical particles are closed, i.e. the spherical particles have closed cell pores.

Claims 14
C1 teaches reduced-calorie food products comprising the spherical particles. (¶19-20, ¶49)

Thus, clearly claims 1-14 of WO 2017/093302 are obvious in view of C1.