(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 October 2007 (18.10.2007)

PCT

(10) International Publication Number
WO 2007/117281 A3

(51) International Patent Classification:
A23C 9/00 (2006.01) *A23L 1/236* (2006.01)

(21) International Application Number:
PCT/US2006/044723

(22) International Filing Date:
17 November 2006 (17.11.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/739,302	23 November 2005 (23.11.2005)	US
60/739,124	23 November 2005 (23.11.2005)	US
60/805,209	19 June 2006 (19.06.2006)	US
60/805,216	19 June 2006 (19.06.2006)	US
11/556,049	2 November 2006 (02.11.2006)	US

(71) Applicant: **THE COCA-COLA COMPANY** [US/US]; Patents, One Coca-Cola Plaza, NW, Atlanta, Georgia 30313 (US).

(72) Inventors: **PRAKASH, Indra**; 9750 Talisman Drive, Alpharetta, Georgia 30022 (US). **DUBOIS, Grant, E.**; 215 Quincy Lane, Roswell, Georgia 30076 (US).

(74) Agent: **PAPPAS, Peter, G.**; Sutherland Asbill & Brennan Llp, 999 Peachtree Street, NE, Atlanta, Georgia 30309-3996, (US).

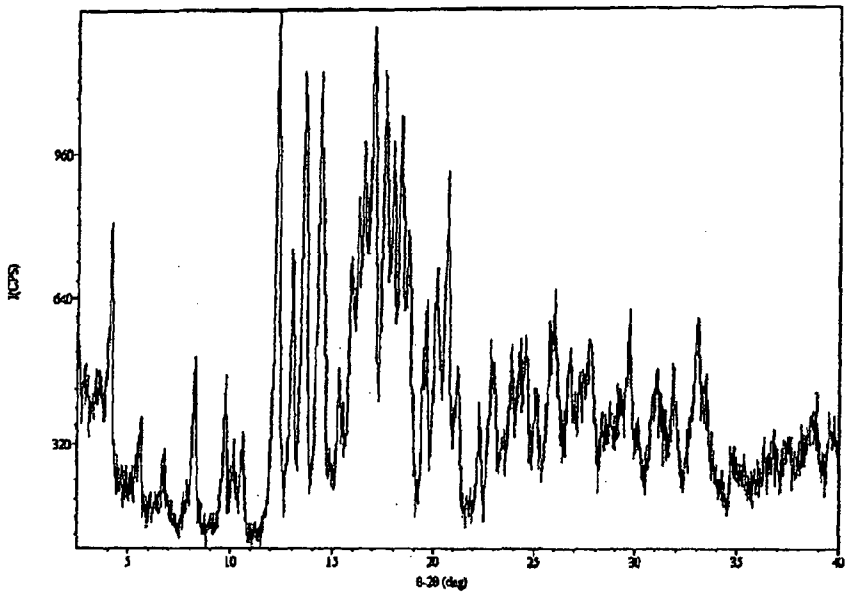
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

[Continued on next page]

(54) Title: DAIRY COMPOSITION WITH HIGH-POTENCY SWEETENER



(57) Abstract: The present invention relates generally to dairy compositions comprising non-caloric or low-caloric high-potency sweeteners and methods for making and using them. In particular, the present invention relates to different dairy compositions comprising at least one non-caloric or low-caloric natural and/or synthetic high-potency sweetener, at least one sweet taste improving composition, and a dairy product. The present invention also relates to dairy compositions and methods that can improve the tastes of non-caloric or low-caloric natural and/or synthetic, high-potency sweeteners by imparting a more sugar-like taste or characteristic. In particular, the dairy compositions and methods provide a more sugar-like temporal profile, including sweetness onset and sweetness linger, and/or a more sugar-like flavor profile.

WO 2007/117281 A3

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
24 July 2008

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/044723

A. CLASSIFICATION OF SUBJECT MATTER
INV. A23C9/00 A23L1/236

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A23C A23L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, FSTA, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/220964 A1 (RIZO NOE [MX] ET AL) 6 October 2005 (2005-10-06) paragraph [0002]; claim 13	1,3-5, 37,38,40
X	DATABASE EPODOC EUROPEAN PATENT OFFICE, THE HAGUE, NL; XP002468391 abstract & JP 11 243859 A (ASAHI INRYO KK) 14 September 1999 (1999-09-14)	1,2,4,5, 8-10
X	DATABASE WPI Week 200115 Derwent Publications Ltd., London, GB; AN 2001-138898 XP002468393 & CN 1 147 917 A (LI S) 23 April 1997 (1997-04-23)	1-9,35, 36
Y	abstract	29-34

-/--

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 February 2008	05/06/2008

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Groh, Björn

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/044723

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DATABASE FSTA [Online] INTERNATIONAL FOOD INFORMATION SERVICE (IFIS), FRANkFURT-MAIN, DE; YOSHIKAWA S ET AL: "Taste of components of stevioside." XP002468392 Database accession no. 80-1-03-t0125 abstract	29-34
Y	SARDESAI V M ET AL: "NATURAL AND SYNTHETIC INTENSE SWEETENERS" JOURNAL OF NUTRITIONAL BIOCHEMISTRY, BUTTERWORTH PUBLISHERS, STONEHAM, GB, vol. 2, no. 5, May 1991 (1991-05), pages 236-244, XP000892854 ISSN: 0955-2863 page 237, column 2	29-34
Y	SCHIFFMAN S S ET AL: "Investigation of synergism in binary mixtures of sweeteners" BRAIN RESEARCH BULLETIN, ELSEVIER SCIENCE LTD, OXFORD, GB, vol. 38, no. 2, 1995, pages 105-120, XP002428872 ISSN: 0361-9230 page 114	29-34

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/044723

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see additional sheet

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1(part)-8(part),9-11,29(part)-40(part)

   dairy composition comprising a dairy product, one intensive sweetener and a sweet-taste-improver being a polyol, according to claims 8 to 11, and dependent claims 29 to 40 in relation to claims 8 to 11.

   ---

2. claims: 1(part)-8(part),12,13,29(part)-40(part)

   dairy composition comprising a dairy product, one intensive sweetener and a sweet-taste-improver being an amino acid, according to claims 12 or 13, and dependent claims 29 to 40 in relation to claims 12 or 13.

   ---

3. claims: 1(part)-8(part),14,15,29(part)-40(part)

   dairy composition comprising a dairy product, one intensive sweetener and a sweet-taste-improver being a poly-amino acid, according to claims 14 or 15, and dependent claims 29 to 40 in relation to claims 14 or 15.

   ---

4. claims: 1(part)-8(part),16-21,29(part)-40(part)

   dairy composition comprising a dairy product, one intensive sweetener and a sweet-taste-improver being an inorganic salt according to claims 16-21, and dependent claims 29 to 40 in relation to claims 16-21.

   ---

5. claims: 1(part)-8(part),22-24,29(part)-40(part)

   dairy composition comprising a dairy product, one intensive sweetener and a sweet-taste-improver being a carbohydrate according to claims 22-24, and dependent claims 29 to 40 in relation to claims 22-24.

   ---

6. claims: 1(part)-8(part),25-28,29(part)-40(part)

   dairy composition comprising a dairy product, one intensive sweetener and a sweet-taste-improver being a synthetic intensive sweetener according to claims 25-28, and dependent claims 29 to 40 in relation to claims 25-28.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2006/044723

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005220964 A1	06-10-2005	WO 2005099469 A2	27-10-2005
JP 11243859 A	14-09-1999	NONE	
CN 1147917 A	23-04-1997	NONE	