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- (81) **Designated States** (*unless otherwise indicated, for every
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DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
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ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
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RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ,
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- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the
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(54) **Title:** COMPOSITIONS AND METHODS FOR INHIBITING PRECIPITATION OF AZO DYES IN A BEVERAGE

(57) **Abstract:** A beverage product containing a first azo-component and a second azo-component in a weight about 1:99 to about 999:1; an electrolyte; and a solvent, wherein the first azo-component and the second- component remain in solution for at least seven days. Preferably, the weight ratio fo the first azo-component to the second azo-component is about 1:9 to about 9:1, and the beverage composition contains no more than 0.12 wt% benzaldehyde. Thus, prevention of precipitation of azo-components from the beverage can be achieved.



INTERNATIONAL SEARCH REPORT

International application No

PCT/US2013/026273

A. CLASSIFICATION OF SUBJECT MATTER
 INV. A23L2/52 A23L2/58
 ADD.

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)
 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 practicable, search terms used)

EPO-Internal, BIOSIS, FSTA, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010/028444 A1 (MATUSCHEK MARKUS [DE] ET AL) 4 February 2010 (2010-02-04) example 4 claims 99,102 paragraphs [0022], [0082], [0086], [0090] - [0093] -----	1-21, 28-40
A	US 2004/091589 A1 (ROY GLENN [US] ET AL) 13 May 2004 (2004-05-13) the whole document -----	1-21, 28-40
A	EP 1 121 868 A1 (STOKELY VAN CAMP INC [US]) 8 August 2001 (2001-08-08) the whole document -----	1-21, 28-40
	-/-	



Further documents are listed in the continuation of Box C.



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 application or patent 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

29 August 2013

Date of mailing of the international search report

29/07/2014

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2013/026273

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	YAPENG FANG ET AL: "Origin and Thermodynamic Properties of the Instability of Synthetic Azo Colorants in Gum Arabic Solutions", JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol. 55, no. 22, 2007, pages 9274-9282, XP055076963, ISSN: 0021-8561, DOI: 10.1021/jf071916t the whole document -----	1-21, 28-40

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/026273

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 all searchable 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 report covers 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.:

1-21, 28-40

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: 1-21, 28-40

Beverage product comprising a solution of a first and a second azo component, an electrolyte and a solvent (claims 1-21); method of preventing precipitation of azo-components from a beverage product (claims 28-40);

2. claims: 22-27

Beverage product comprising a solution of an azo-component, a non azo-component, an electrolyte and a solvent (claims 22-27)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2013/026273

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010028444	A1	04-02-2010	AT 494799 T 15-01-2011
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		EP 2139347 A2	06-01-2010
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