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(71) Applicant (for all designated States except US): JOHN-  
SON & JOHNSON CONSUMER COMPANIES, INC.

[US/US]; 199 Grandview Road, Skillman, New Jersey  
08558 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): COLACO, Ally-  
wyn [US/US]; 125 Main Street, South River, New Jersey  
08882 (US). CORET, Joel [US/US]; 135 Castleton Road,  
Princeton, New Jersey 08540 (US). DESAI, Saurabh  
[US/US]; 3 Corwen Court, Somerset, New Jersey 08873  
(US). SINGH, Shailendra [US/US]; 28 Spruce Meadows  
Drive, Monroe, New Jersey 08831 (US). BIANCHINI,  
Robert [US/US]; 3 Flagg Way, Hillsborough, New Jersey  
08844 (US).

(74) Agent: JOHNSON, Philip; One Johnson & Johnson  
Plaza, New Brunswick, New Jersey 08933 (US).

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[Continued on next page]

(54) Title: A COMPOSITION TO IMPART BENEFIT AGENTS TO ANIONIC SUBSTRATES AND METHODS OF ITS USE

Influence of Cationic Surfactants and Polymers on Delta A\* for Bleached and Natural Blond Hair

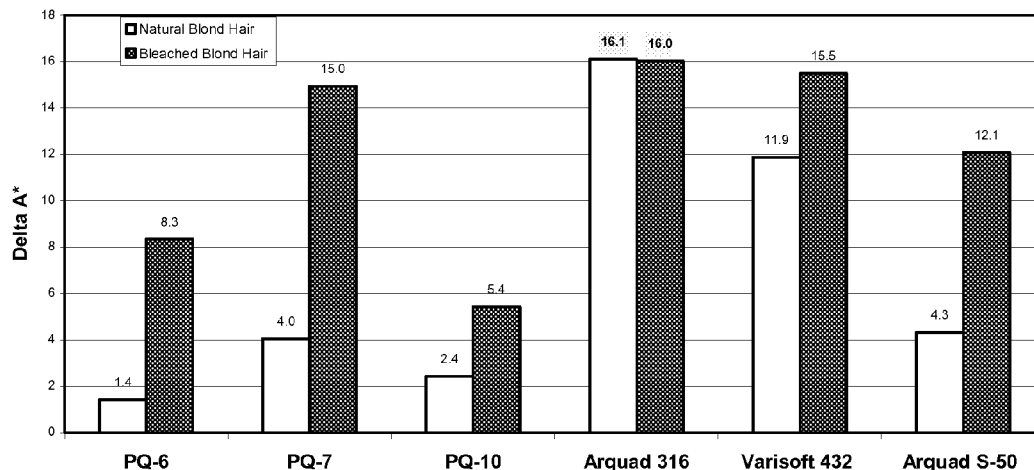


FIGURE 1

(57) Abstract: This invention relates to compositions containing pigments or other benefit agents in particulate form may be com-  
bined with a quaternary ammonium compound that can effectuate adsorption to anionic substrates, methods of making such compo-  
sitions and methods of their use.

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**A. CLASSIFICATION OF SUBJECT MATTER**  
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 C11D1/0C

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)  
**A61K**

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**

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/095218 A1 (DEGENHARDT CHARLES R [US] ET AL) 5 May 2005 (2005-05-05) paragraph [0049]; examples 9,18,27,36,45,54,63,72,81	1-21, 23-26
X	GB 2 196 980 A (PROCTER & GAMBLE) 11 May 1988 (1988-05-11) examples II-V	1-21, 23-26
X	US 6 649 727 B1 (ANDERSON JEFFREY T [US] ET AL) 18 November 2003 (2003-11-18) column 3, lines 3,4; example 16	1-21, 23-26
X	US 2006/115442 A1 (KATZ MELISSA I [US] ET AL) 1 June 2006 (2006-06-01) examples 1-9	1-21, 23-26
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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	*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
*E* earlier document but published on or after the international filing date	*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
*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)	*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.
*O* document referring to an oral disclosure, use, exhibition or other means	*S* document member of the same patent family
*P* document published prior to the international filing date but later than the priority date claimed	

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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer <b>Vayssié, Stéphane</b>
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INTERNATIONAL SEARCH REPORT

International application No  
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/020476 A1 (WAHL ERROL HOFFMAN [US] ET AL) 27 January 2005 (2005-01-27) paragraph [0059]; claim 1; examples 1-7 -----	1-21, 23-26
X	US 2004/105889 A1 (RYDE TUULA [US] ET AL) 3 June 2004 (2004-06-03) paragraph [0035]; claims 1,21 -----	1-21, 23-26

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2008/069640

## 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 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.:

see additional sheet(s)

### 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: 1-21,23-26 (part)

a composition for delivering a benefit agent to an anionic substrate, comprising:  
a) a particulate benefit agent; and  
b) a quaternary ammonium compound according to formula (1) where R3 is C8-C36 alk(en)yl  
a method of depositing a benefit agent on a negatively-charged substrate comprising contacting said negatively-charged substrate with a composition comprising a quaternary ammonium compound as defined previously and a method of making a composition for delivering a benefit agent to an anionic substrate, comprising mixing a cationic quaternary ammonium compounds as defined previously with a benefit agent and applying sufficient energy to the combination to form a homogeneous mixture by dispersing the benefit agent uniformly with the cationic quaternary ammonium compound  
(so-called tri-fatty alkyl quat. alternative)  
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## 2. claims: 1-21,23-26 (part)

a composition for delivering a benefit agent to an anionic substrate, comprising:  
a) a particulate benefit agent; and  
b) a quaternary ammonium compound according to formula (1) where R3 is C1-C4 alkyl  
a method of depositing a benefit agent on a negatively-charged substrate comprising contacting said negatively-charged substrate with a composition comprising a quaternary ammonium compound as defined previously and a method of making a composition for delivering a benefit agent to an anionic substrate, comprising mixing a cationic quaternary ammonium compounds as defined previously with a benefit agent and applying sufficient energy to the combination to form a homogeneous mixture by dispersing the benefit agent uniformly with the cationic quaternary ammonium compound  
(so-called di-fatty alkyl quat. alternative)  
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## 3. claim: 22

a composition for depositing a benefit agent on a negatively-charged substrate comprising:  
(a) a positively-charged compound and an HLB of less than about 10; and  
(b) a benefit agent dispersed substantially homogeneously therein  
(so-called HLB alternative)  
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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 2005095218	A1	05-05-2005	AU 2004285571 A1	12-05-2005
			BR PI0415576 A	02-01-2007
			CA 2543198 A1	12-05-2005
			CN 1871006 A	29-11-2006
			EP 1680066 A2	19-07-2006
			JP 2007508378 T	05-04-2007
			MX PA06004490 A	20-06-2006
			WO 2005041889 A2	12-05-2005
GB 2196980	A	11-05-1988	NONE	
US 6649727	B1	18-11-2003	AT 319759 T	15-03-2006
			AU 2048601 A	13-02-2002
			AU 2001220486 B2	13-10-2005
			BR 0017289 A	24-06-2003
			CA 2416322 A1	07-02-2002
			CN 1454228 A	05-11-2003
			DE 60026587 T2	28-12-2006
			EP 1305353 A1	02-05-2003
			ES 2256074 T3	16-07-2006
			JP 2004505141 T	19-02-2004
			MX PA03000614 A	05-04-2004
			WO 0210248 A1	07-02-2002
US 2006115442	A1	01-06-2006	NONE	
US 2005020476	A1	27-01-2005	NONE	
US 2004105889	A1	03-06-2004	NONE	