# (19) World Intellectual Property Organization International Bureau





### (43) International Publication Date 11 October 2001 (11.10.2001)

### **PCT**

# (10) International Publication Number WO~01/74311~A3

(51) International Patent Classification<sup>7</sup>: A61K 7/06

(21) International Application Number: PCT/US01/10363

(22) International Filing Date: 30 March 2001 (30.03.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

PCT/US00/08760 31 March 2000 (31.03.2000) US 60/231,152 8 September 2000 (08.09.2000) US 60/261,384 12 January 2001 (12.01.2001) US

- (71) Applicant: THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).
- (72) Inventors: MIDHA, Sanjeev; 4563 Creekrun Drive, Mason, OH 45040 (US). THOMSON, Shari, Renee; 3630 Tarpis Avenue, #20, Cincinnati, OH 45208 (US). SNY-DER, Michael, Albert; 5-15-1701 Kyo-Cho Naka, Higashinada-ku, Kobe, Hyogo 658-9932 (JP).
- (74) Agent: REED, T., David; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217-1087 (US).

- (81) Designated States (national): AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report
- (88) Date of publication of the international search report: 7 March 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

£ 4

#### (54) Title: LEAVE-IN HAIR COSMETIC COMPOSITIONS FOR ENHANCING VOLUME

(57) Abstract: Leave-in hair cosmetic compositions for enhancing hair volume, comprising non-spherical microparticles exhibiting a mean particle size of less than about 100μm in its longest dimension, a water-soluble or water-swellable polymer, and an aqueous carrier such that the combination of the polymer and the microparticles results in a film-forming network. Also disclosed are methods for enhancing hair volume, and more particularly for enhancing hair volume with leave-in aqueous cosmetic compositions which contain non-spherical microparticles of less than 100μm in its longest dimension, a water-soluble or water-swellable polymer and an aqueous carrier. The disclosed compositions provide improved hair volume, body, bounce, fullness, springiness, and texture in addition to providing good hair conditioning and styling benefits. Fluid-encapsulated, flexible microspheres which exhibit a mean particle size of less than about 300μm in diameter may also be included in the compositions.

#### INTERNATIONAL SEARCH REPORT

International Application No PCT/US 01/10363

A. CLASSIF	ICATION OF	SUBJECT	MATTER
IPC 7	A61K7/	/06	

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)

IPC 7 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)

CHEM ABS Data, EPO-Internal

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 18431 A (THE PROCTER & GAMBLE CO.) 7 May 1998 (1998-05-07) the whole document	1
X	GB 2 315 215 A (THE PROCTER & GAMBLE CO.) 28 January 1998 (1998-01-28) claim 1	1
Х	US 4 351 754 A (J. DUPRÉ) 28 September 1982 (1982-09-28) the whole document	1
Х	EP 0 327 382 A (ECC INT. LTD) 9 August 1989 (1989-08-09) the whole document	1
	-/	

X Further documents are listed in the continuation of box C.	Patent family members are listed in 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	<ul> <li>*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</li> <li>*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</li> <li>*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.</li> <li>*&amp;* document member of the same patent family</li> </ul>	
Date of the actual completion of the international search	Date of mailing of the international search report	
16 November 2001	29/11/2001	
Name and mailing address of the ISA 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	Authorized officer  Glikman, J-F	

## INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 01/10363

	ation) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Category °	Citation of document, with indication, where appropriate, of the relevant passages	
X	DATABASE CHEMICAL ABSTRACTS 'Online! STN; Access number: 97:150 584, XP002183182 abstract & JP 57 063315 A (TEIJIN, LTD) 16 April 1982 (1982-04-16)	1
X	DATABASE CHEMICAL ABSTRACTS 'Online! STN; Access number: 124: 37 397, XP002183183 abstract & JP 07 267817 A (SHISEIDO CO. LTD) 17 October 1995 (1995-10-17)	
X	DATABASE CHEMICAL ABSTRACTS 'Online! STN; Access number: 124: 37 404, XP002183184 abstract & JP 07 267828 A (SHISEIDO CO. LTD) 17 October 1995 (1995-10-17)	1
X	DATABASE CHEMICAL ABSTRACTS 'Online! STN; access number: 130: 56 990, XP002183185 abstract & JP 01 033211 A (LION CORP.) 3 February 1989 (1989-02-03)	1

1

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No PCT/US 01/10363

cited in search report	date	member(s)	date
WO 9818431 A	07-05-1998	AU 732059 B2 AU 6907698 A CN 1253491 A CZ 9901508 A3 EP 0946130 A2 JP 2001503063 T WO 9818431 A2	12-04-2001 22-05-1998 17-05-2000 15-09-1999 06-10-1999 06-03-2001 07-05-1998
GB 2315215 A	28-01-1998	NONE	
US 4351754 A	28-09-1982	CA 1155992 A1 JP 1047513 B JP 1559128 C JP 56047477 A	25-10-1983 13-10-1989 16-05-1990 30-04-1981
EP 327382 A	09-08-1989	EP 0327382 A2 GB 2215733 A ,B	09-08-1989 27-09-1989
JP 57063315 A	16-04-1982	JP 1029808 B JP 1547063 C	14-06-1989 28-02-1990
JP 07267817 A	17-10-1995	NONE	
JP 07267828 A	17-10-1995	NONE	
JP 1033211 A	03-02-1989	NONE	