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(54) Title: COMPOSITION FOR DYEING KERATIN FIBRES COMPRISING AT LEAST ONE DIRECT DYE COMPRISING A DISULPHIDE/PROTECTED-THIOL FUNCTION AND AT LEAST ONE SILICEOUS COMPOUND COMPRISING A THIOL FUNCTION AND METHOD USING THE COMPOSITION

(57) Abstract: The invention relates to a composition comprising i) one or more direct dye(s) comprising a disulphide function or functions or comprising a protected-thiol function or functions, and ii) one or more siliceous compounds comprising a thiol function or functions, used for dyeing keratin fibres, in particular human keratin fibres such as the hair. It also relates to the method of dyeing keratin fibres using said composition and to the use of direct dyes comprising a disulphide or protected-thiol function associated with the siliceous compounds comprising thiol functions, in the dyeing and lightening of keratin fibres. This composition allows new systems for very powerful, homogeneous hair dyeing, which are fast with respect to external agents and which do not impair the cosmetic properties of keratin fibres.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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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)

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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, CHEM ABS 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 6 544 499 B1 (GLENN JR ROBERT WAYNE [GB] ET AL) 8 April 2003 (2003-04-08) column 3, line 40 - column 4, line 11 column 5, line 22 - line 47 column 28, line 16 - line 20 column 28, line 66 - column 29, line 35 column 37, line 5 - line 19 examples	1-17
A	EP 1 647 580 A (OREAL [FR]) 19 April 2006 (2006-04-19) the whole document	1-17
A	GB 2 412 916 A (CIBA SC HOLDING AG [CH]) 12 October 2005 (2005-10-12) the whole document	1-17
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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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.
A	EP 0 829 257 A (DOW CORNING [US]) 18 March 1998 (1998-03-18) page 2, line 14 - line 23 page 3, line 5 - line 55 examples -----	1-17
A	DATABASE WPI Week 198750 Thomson Scientific, London, GB; AN 1987-352109 [50] XP002501791 NAITO Y; OOSHIMA H: "Hair perming agent - comprises mercapto-alkylene tri:alkoxy silane" & JP 62 255413 A (KAO CORP) 7 November 1987 (1987-11-07) abstract -----	1-17
A	EP 0 507 469 A (DOW CORNING [US]) 7 October 1992 (1992-10-07) the whole document -----	1-17

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2009/051786

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6544499	B1	08-04-2003	US 2002012639 A1	31-01-2002
EP 1647580	A	19-04-2006	BR PI0506095 A	05-09-2006
			CN 1853605 A	01-11-2006
			FR 2876576 A1	21-04-2006
			JP 2006111626 A	27-04-2006
			KR 20060054024 A	22-05-2006
			KR 20080099219 A	12-11-2008
			MX PA05010969 A	20-04-2006
GB 2412916	A	12-10-2005	AR 048595 A1	10-05-2006
			BR PI0508391 A	25-09-2007
			EP 1750663 A2	14-02-2007
			EP 2075036 A1	01-07-2009
			WO 2005097051 A2	20-10-2005
			JP 2007532513 T	15-11-2007
			KR 20070006859 A	11-01-2007
			US 2008295260 A1	04-12-2008
EP 0829257	A	18-03-1998	JP 10114633 A	06-05-1998
			US 5776454 A	07-07-1998
JP 62255413	A	07-11-1987	NONE	
EP 0507469	A	07-10-1992	DE 69200991 D1	09-02-1995
			DE 69200991 T2	06-07-1995
			JP 3045351 B2	29-05-2000
			JP 5078221 A	30-03-1993