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(54) Title: HAIR DYE COMPOSITION

(57) Abstract: A hair dye composition containing a triazene dissociative direct dye represented by general formula (1):
A-N=N-NH-B (1) wherein A and B are each a monocyclic or a bicyclic aromatic heterocyclic group that may have a substituent
or a monocyclic or a bicyclic aryl group that may have a substituent and contain none of a carboxy group, a sulfo group and a
quaternary ammonium group; and A and B each bind to a triazene-1,3-diyl group represented by -N=N-NH- via a carbon atom
within A and B each. A and B may be the same or different.



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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)

A61Q

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	DATABASE WPI Week 197850 Thomson Scientific, London, GB; AN 1978-90873A XP002523391 & JP 53 043324 B (PENTEL KK) 18 November 1978 (1978-11-18) cited in the application abstract	1-3
A	----- EP 0 071 901 A (HOECHST AG [DE]) 16 February 1983 (1983-02-16) cited in the application page 1, line 7 - line 13 page 13, line 25	1-4
A	----- WO 2006/068104 A (KAO CORP [JP]; FUJI PHOTO FILM CO LTD [JP]; YAMAGUCHI MASAKAZU [JP]; P) 29 June 2006 (2006-06-29) cited in the application -/--	1-4

☒ 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

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	-& EP 1 832 276 A (KAO CORP [JP]; FUJIFILM CORP [JP]) 12 September 2007 (2007-09-12) paragraph [0010] examples 1-10 -----	

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
JP 53043324	B	18-11-1978	JP 961101 C	28-06-1979
			JP 49027332 A	11-03-1974
EP 0071901	A	16-02-1983	CA 1171850 A1	31-07-1984
			DE 3131115 A1	24-02-1983
			JP 58035159 A	01-03-1983
			ZA 8205656 A	29-06-1983
WO 2006068104	A	29-06-2006	EP 1832276 A1	12-09-2007
			JP 2006182653 A	13-07-2006
			US 2008134448 A1	12-06-2008
EP 1832276	A	12-09-2007	JP 2006182653 A	13-07-2006
			WO 2006068104 A1	29-06-2006
			US 2008134448 A1	12-06-2008