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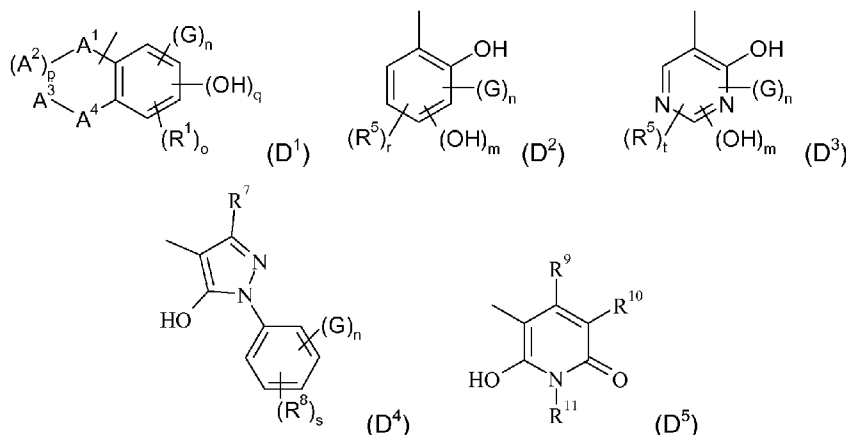
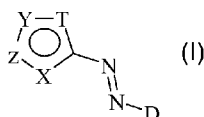
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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[Continued on next page]

(54) Title: ANIONIC DYES AND HAIR DYE COMPOSITIONS CONTAINING THEM



(57) Abstract: The present invention refers to dyestuffs of the formula (I) and its tautomeric forms, wherein D is a group of the formula D<sup>1</sup>, D<sup>2</sup>, D<sup>3</sup>, D<sup>4</sup> or D<sup>5</sup> (D<sup>1</sup>) (D<sup>2</sup>) (D<sup>3</sup>) (D<sup>4</sup>) (D<sup>5</sup>) wherein T, X, Y, Z, A<sup>1</sup> to A<sup>4</sup>, G, R<sup>1</sup>, R<sup>5</sup>, R<sup>7</sup> to R<sup>11</sup>, m, n, o, p, q, r, s and t are defined as given in claim 1, a process for their manufacture and hair dye compositions containing them.

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- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2009/053919

A. CLASSIFICATION OF SUBJECT MATTER					
INV.	A61Q5/06	A61Q5/10	A61K8/49	C09B29/12	C09B29/14
	C09B29/16	C09B29/36	C09B29/033	C09B29/036	C09B29/039
	C09B29/042	C09B29/045	C09B29/048		
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)					
C09B A61K 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, CHEM ABS Data, 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	EP 1 849 454 A (KAO CORP [JP]; FUJIFILM CORP [JP]) 31 October 2007 (2007-10-31) cited in the application				1-3,8-10
Y	claims 1,3; examples				1-3,8-10
X	EP 1 270 676 A (MITSUBISHI CHEM CORP [JP]) 2 January 2003 (2003-01-02)				1-3,8,9
X	page 12 - page 13; claims 1,12; tables 7,8				1-3
X	paragraph [0060] - paragraph [0061]				8
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X	page 11 - page 12; tables II-B				1-3
-/--					
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <span style="margin-left: 200px;"><input checked="" type="checkbox"/> See patent family annex.</span>					
* 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		
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*O* document referring to an oral disclosure, use, exhibition or other means			*&* document member of the same patent family		
*P* document published prior to the international filing date but later than the priority date claimed					
Date of the actual completion of the international search			Date of mailing of the international search report		
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## INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2009/053919

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 4 524 124 A (BERGTHALLER PETER [DE] ET AL) 18 June 1985 (1985-06-18)	1-3,8
X	column 9 - column 10	1-3
X	column 15 - column 16	1-3
X	column 21, line 33 - column 25, line 49	1-3,8
X	GB 1 308 917 A (ICI LTD) 7 March 1973 (1973-03-07)	1-3,8
X	page 6, column 1, line 14 - line 19; claims 1,7	1-3
X	page 11; example 40	1-3,8
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X	paragraph [0078]	1-3
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X	paragraphs [0214], [0243], [0249]	1-3,8
Y	EP 1 719 498 A (KPSS KAO GMBH [DE]) 8 November 2006 (2006-11-08)	1-3,8-10
Y	paragraphs [0005], [0009], [0019]	1-3,8-10
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X	page 4, line 36 - page 5, line 55; claim 7	1,2,4,6, 7
X	EP 1 475 416 A (FUJI PHOTO FILM CO LTD [JP]) 10 November 2004 (2004-11-10)	1,2,5,9
Y	paragraph [0029]; claims 1,5,6,8	8
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X	page 15; examples 6-10	1,2,6,9
X	page 14, line 10 - line 25	8
X	DE 20 33 281 A1 (BADISCHE ANILIN- & SODA-FABRIK AG) 20 January 1972 (1972-01-20)	1,2,7-9
	page 13; example 57; table 2	
	page 2, paragraph 4 - page 3, paragraph 1	

**-INTERNATIONAL SEARCH REPORT**

International application No.  
PCT/EP2009/053919

**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.:

**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: 1,2,8,9,10 (partially), 3 (completely)

Azo dyestuff for dying hair, its process of manufacture and compositions comprising this dyestuff, based on 5-membered heterocyclic component and naphthol / condensed bicyclic component (substituent D1)

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2. claims: 1,2,8,9,10 (partially), 4 (completely)

Azo dyestuff for dying hair, its process of manufacture and compositions comprising this dyestuff, based on 5-membered heterocyclic component and phenolic component (substituent D2)

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3. claims: 1,2,8,9,10 (partially), 5 (completely)

Azo dyestuff for dying hair, its process of manufacture and compositions comprising this dyestuff, based on 5-membered heterocyclic component and hydroxy-pyrimidin component (substituent D3)

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4. claims: 1,2,8,9,10 (partially), 6 (completely)

Azo dyestuff for dying hair, its process of manufacture and compositions comprising this dyestuff, based on 5-membered heterocyclic component and phenyl-pyrazolinone component (substituent D4)

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5. claims: 1,2,8,9,10 (partially), 7 (completely)

Azo dyestuff for dying hair, its process of manufacture and compositions comprising this dyestuff, based on 5-membered heterocyclic component and pyridinone component (substituent D5)

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2009/053919

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