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(21) International Application Number: PCT/US98/11513 (22) International Filing Date: 3 June 1998 (03.06.98) (30) Priority Data: 08/889,987 10 July 1997 (10.07.97) US (71) Applicant: BRISTOL-MYERS SQUIBB COMPANY [US/US]; 345 Park Avenue, New York, NY 10154 (US). (72) Inventor: ANDERSON, James, S.; 1 Summit Lane, Bethel, CT 06801 (US). (74) Agent: SIMON, Morton, S.; Bristol-Myers Squibb Company, 2 Blachley Road, Stamford, CT 06922 (US).			(81) Designated States: AU, BR, CA, CN, JP, KR, MX, NZ, PL, RU, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>Without international search report and to be republished upon receipt of that report.</i>
(54) Title: DIRECT HAIR DYE COMPOSITIONS AND METHODS CONTAINING NOVEL ANTHRAQUINONE MIXTURES			
(57) Abstract The invention provides compositions and methods for the direct dyeing of keratinous fibers, with particular regard to human hair on the head. The compositions of the invention contain novel anthraquinone mixtures in which each of the component anthraquinones has similar polarities. Compared with the known, commercially-available anthraquinone hair dye colorant, Disperse Blue 3 (DB 3), which comprises a mixture of anthraquinones having dissimilar polarities, the anthraquinone mixtures of the present invention surprisingly and advantageously were found to color hair more intensely and also to synergize to a greater extent with other anthraquinones, such as Disperse Violet 1 (DV 1), when used in hair dye formulations. The novel compound 1-[(2-hydroxyethyl)amino]-4-[(2-hydroxypropyl)amino]-9,10-anthracenedione is also disclosed.			