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[54] **SYNTHETIC MELANIN**

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Related U.S. Application Data

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[51] Int. Cl.⁵ **C08G 63/06; C08G 65/38**

[52] U.S. Cl. **528/206; 424/59;**
424/63

[58] Field of Search **528/206; 424/59, 63**

[56] **References Cited**

PUBLICATIONS

John M. Pawelek, "Synthesis and Characterization of Melanins from Dihydroxyindole-2-Carboxylic Acid

and Dihydroxyindole," in *Pigment Cell Research*, 1992, pp. 113-121.

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[57] **ABSTRACT**

A melanin that is soluble in an aqueous solution at a pH between 5 and 9 at a temperature of 0° to 100° C. Advantageously, the melanin is capable of being filtered through at least a 0.45 micron size filter, and has a molecular weight of greater than 10,000 kilodaltons. The melanin is useful for providing a naturally-appearing tan to mammalian skin and hair. Such melanin can be produced by combining dopachrome and an appropriate enzyme, or by incubating 5,6-dihydroxyindole-2-carboxylic acid alone or with 5,6-dihydroxyindole, or with 3-amino-tyrosine. The melanin is also useful for providing a sun-screen to mammalian skin and hair, to treat post-inflammatory hypo- and hyperpigmentation, to tint glass and plastic, to protect industrial materials against ultraviolet damage, and as a coloring agent in foodstuffs such as coffee, tea, soda, whiskey and liquors.

12 Claims, No Drawings