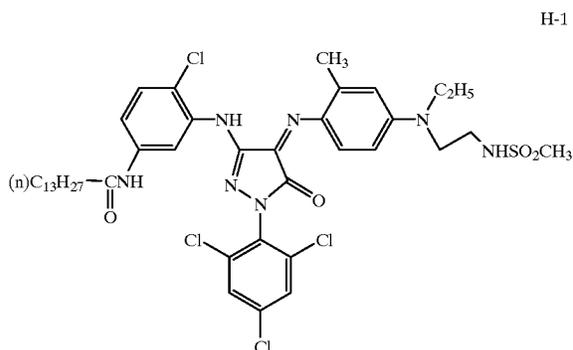


## Production Example 10

Preparation of Comparative Coloring Composition  
(B-1)

[0279] A coloring composition with a solid content of 20% was obtained in the same manner as in Production Example 3 except that the following compound (H-1) was used in place of the oil-soluble dye (I-25). The particle size of the coloring composition was 45 nm in terms of volume average diameter.

[0280] Hereinafter, this composition is referred to as the coloring composition (B-1).



Example 1

[0281] 10 parts of diethylene glycol, 8 parts of glycerin, 8 parts of triethylene glycol monobutyl ether, 4 parts of 25% aqueous surfactant solution (Emal 20C, a product of Kao Corp.) and 8 parts of de-ionized water were mixed with 62 parts of the coloring composition (A-1) prepared in Production Example 1 above and filtered with a 0.2  $\mu\text{m}$  filter to prepare an aqueous ink for an ink jet.

## Examples 2 to 9

[0282] In Example 1, the coloring compositions (A-2) to (A-9) were added in place of the coloring composition (A-1), so that the oil-soluble dye was added in the predetermined amount. Then, 10 parts of diethylene glycol, 8 parts of glycerin, 8 parts of triethylene glycol monobutyl ether and 4 parts of 25% aqueous surfactant (Emal 20C, a product of Kao Corp.) (when the surfactant was previously used for dispersion of the dye, the amount of the surfactant added was regulated so that the same amount of the surfactant was used in total in the respective examples) were added thereto, followed by adding de-ionized water thereto to adjust the total amount to 100 parts. Each solution was filtered through a 0.2  $\mu\text{m}$  filter to prepare each aqueous ink for an ink jet.

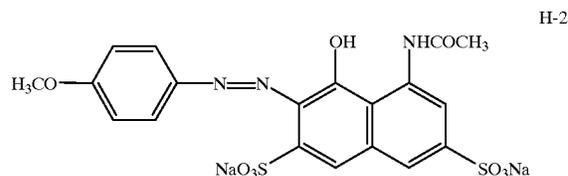
## Comparative Example 1

[0283] An ink for an ink jet was prepared in the same manner as in Example 1 except that the coloring composition (B-1) prepared in Production Example 10 was used in place of the coloring composition (A-1).

## Comparative Example 2

[0284] 10 parts of diethylene glycol, 8 parts of glycerin, 10 parts of tetraethylene glycol monobutyl ether, 1 part of

diethanol amine, and 67 parts of de-ionized water were mixed with 4 parts of the following comparative pigment (H-2) and filtered with a 0.2  $\mu\text{m}$  filter, to prepare an ink for an ink jet.



## [0285] (Recording and Evaluation of Images)

[0286] The inks for ink jetting in the Examples and Comparative Examples described above were evaluated as follows. The results are shown in Table 2.

[0287] In Table 2, the item "Absorption of aqueous dispersion" shows the evaluated spectral absorption characteristics of the inks for ink jetting. The items "Color tone", "Dependence on paper", "Water resistance" and "Light resistance" were evaluated after images of each ink for ink jetting were recorded on a photo glossy paper (ink jet paper, photo-grade, from Fuji Photo Film Co., Ltd.) by means of an ink jet printer (PM-700C from EPSON Co., Ltd.). The item "Stability with time" shows the degree of generation of coarse grains evaluated after the ink for ink jetting was left.

## [0288] &lt;Spectral Absorption Characteristics&gt;

[0289] Each ink for ink jetting was diluted with de-ionized water such that the absorbance thereof was reduced to 0.8-1.2. Then, its visible absorption spectrum was taken to determine the absorbance at a shorter wavelength ( $\lambda_{\text{max}}-75$  (nm)) and the absorbance at a longer wavelength ( $\lambda_{\text{max}}+75$  (nm)) respectively. These absorbances were expressed assuming that the absorbance at the maximum absorption wavelength ( $\lambda_{\text{max}}$  (nm)) was 1.

## [0290] &lt;Color Tone&gt;

[0291] The recorded image was visually observed, and was judged as either being A (good) or B (poor).

## [0292] &lt;Dependency on Paper&gt;

[0293] The color tone of the image formed on the photo glossy paper and the color tone of an image formed separately on a regular paper for PPC were compared. If the difference between the two images was slight, an evaluation of A (good) was given. If the difference between the two images was great, an evaluation of B (poor) was given.

## [0294] &lt;Water-Resistance&gt;

[0295] The photoglossy paper on which the image was formed was dried at room temperature for one hour. Thereafter, the paper was submerged in water for 30 seconds, was naturally dried at room temperature, and the bleeding thereof was observed. Papers in which there was no bleeding received an evaluation of A, papers in which there was slight bleeding received a B, and papers in which there was much bleeding received a C.