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Safranin O

CAS RN[®]: 477-73-6.—Dark red powder consisting of a mixture of 3,7-diamino-2,8-dimethyl-5-phenylphenazinium chloride, C₂₀H₁₉ClN₄—350.85, and 3,7-diamino-2,8-dimethyl-5-o-tolylphenazinium chloride, C₂₁H₂₁ClN₄—364.88—Sparingly soluble in 70 percent alcohol yielding a clear red solution with a yellowish-red fluorescence.

IDENTIFICATION

- **A.** To 10 mL of a 0.5% w/v solution add 5 mL of hydrochloric acid: a bluish violet solution is produced.
- **B.** To 10 mL of a 0.5% w/v solution add 5 mL of sodium hydroxide solution (1 in 5): a brownish-red precipitate is produced.
- **C.** To 100 mg add 5 mL of sulfuric acid: a green solution is produced, which, on dilution, changes to blue and finally to red.

Absorption Characteristics: Dissolve 50 mg in 250 mL of 50 percent alcohol. Dilute 3 mL of this solution with 50 percent alcohol to 200 mL. Determine the absorbance, in a 1-cm cell, with a suitable spectrophotometer. The absorbance maximum is in the range of 530 to 533 nm; the ratio $(P - 15)/(P + 15)$ is between 1.10 and 1.32, in which P is the wavelength of maximum absorbance.

[NOTE—A suitable grade is available as catalog number 10,214-8 from Sigma-Aldrich, www.sigma-aldrich.com.]

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
SAFRANIN O	Margareth R.C. Marques Principal Scientific Liaison	HDQ Headquarters

Most Recently Appeared In:

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