INFLUENCE OF Al (III) AND Fe (III) AS INTERFERENCE ION ON THE DETERMINATION OF Zn (II) WITH ALIZARIN RED S (ARS) USING SPECTROPHOTOMETRY METHOD

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Abstract

Zinc determination may be carried out by complexing it with Alizarin Red S (ARS) and analyzed by spectrophotometry UV-Vis at 445 nm wavelength. The linear calibration curve resulted in Zn concentration of 0-20 ppm has \( r^2 = 0.995 \). Addition of \( \text{Al}^{3+} \) and \( \text{Fe}^{3+} \) could start interfering the absorbance measurement of Zn at 15 ppm dan 3 ppm respectively. This method is simple, sensitive, and inexpensive, so it may be applied to determine Zn in a red seaweed \( \text{Eucheuma cottonii} \), which is 24,2491 mg/kg.

Keywords: zinc (Zn), interference ion, \( \text{Al}^{3+} \), \( \text{Fe}^{3+} \), Alizarin Red S (ARS), spectrophotometry UV-Vis