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
Synthesis and spectrophotometric determination of acidity constants of 2,3,4,6'-tetrahydroxy-3'-sulfoazobenzene and their use in determination of aluminum

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Abstract: A novel azo derivative, 2,3,4,6'-tetrahydroxy-3'-sulfoazobenzene (THSA), was synthesized by using pyrogallol. The acid dissociation constants, or K_a values, of THSA were determined by the UV-visible spectroscopic technique. The protonation and deprotonation behaviors of the title molecule were studied from the super basic to the super acid region (i.e. 10 N NaOH to 98% H₂SO₄), including the pH region. A selective and sensitive UV-visible spectrophotometric method was devised for determination of aluminum by using this ligand. The developed method was successfully applied to an alunite mineral and to pharmaceutical preparations for the determination of aluminum.

Key Words: Azo dye, acidity constants, aluminum, spectrophotometric determination

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