

A SUPERFICIAL SYNTHESIS OF SELENIUM NANOSPHERES USING WET CHEMICAL APPROACH

SONAM MALHOTRA¹, NEETU JHA² & KRUTIKA DESAI³

¹School of Science, SVKM's NMIMS, Mumbai, Maharashtra, India

²Institute of Chemical Technology, Matunga, Mumbai, Maharashtra, India

³SVKM's Mithibai College of Arts, Chauhan Institute of Science, Amrutben Jivanlal College of
Commerce and Economics, Mumbai, Maharashtra, India

ABSTRACT

Dextrin stabilized Selenium spherical nanoparticles have been successfully synthesized from a simple and a wet chemical approach by reducing sodium selenite, a selenium salt with Ascorbic Acid at room temperature in this study. The stirring effect and the effect of varied ratios were studied on controlling the nucleation of the nanoparticles (20-30nm) and reducing the polydispersity index. The nanoparticles were coated with dextrin maintaining the stability of the nanoparticles. The morphology and purity of the obtained nanoparticles were studied using various analytical tools.

KEYWORDS: Selenium, Nanoparticles, Dextrin, Ascorbic Acid, Sodium Selenite and Polydispersity Index