

An Importance of Selenium Element Related Analogues

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Selenium is a p-block element with atomic number 34, valence electronic configuration ([Ar] 3d¹⁰ 4s² 4p⁴) and also a member of chalcogen family. Selenium is an essential trace element in having its own codon in mRNA that specifies its insertion into selenoproteins as selenocysteine and this insertion for selenoprotein production has some implications for the requirement of selenium for cancer prevention and this element also involved in different physiological functions of the human body, having its chemoprevention properties. Its deficiency explained by low 60-70% of normal selenoenzyme activity levels in brain and occurs only when a low selenium level is linked with an additional stress. One analogues of selenium is selenosemicarbazone. Reaction of KSeCN with hydrazine hydrate and cyclohexanone in acidic medium resulted into formation of cyclohexanone selenosemicarbazone. Anti-tubercular activity of the compound is also investigated.

Keywords : Selenium, cyclohexanone selenosemicarbazone, anti-tubercular activity