



## Synthesis and Anticancer Assay of Novel Silyl-thiourea Derivatives

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### ABSTRACT

*The present work aims at the study of reaction of diphenyldiisothiocyanatosilane with amine ligands as a convenient pathway for synthesis of novel silyl-thiourea derivatives with silicon atom in a hyper coordinate environment. A rational mechanism of this reaction involves the coupling of isothiocyanate with amine through addition reaction and the involvement of lone pair of N/O hetero atoms in vicinity of silicon for creating hyper coordination around silicon atom. The structures of all the compounds were confirmed on the basis of spectroscopic techniques (FT-IR, <sup>1</sup>H NMR, <sup>13</sup>C NMR, UV spectroscopy) and elemental analyses. The synthesized compounds were screened for anticancer activity against HeLa cells using MTT colorimetric assay.*

**Keywords:** diphenyldiisothiocyanatosilane, silyl-thiourea, hyper coordination, anticancer, MTT.

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