

Abstract

Keeping in view the clinical importance of Nuclear Medicine in diagnosis, Six new ligands were synthesized by reacting Benzoyl Isothiocyanate with respective Amines and Amino acids. The prepared ligands were characterized by IR, $^1\text{H-NMR}$ and labeled with Technetium-99m ($^{99\text{m}}\text{Tc}$). The effect of various labeling parameter such as the concentration of the ligand, quantity of the $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ used for reduction, pH, Volume, Heating and the activity of the $^{99\text{m}}\text{Tc}$ used to label the ligand was noticed. The Quality Control states the labeling yield and radiochemical purity of the prepared $^{99\text{m}}\text{Tc}$ -ligands complexes up to 90%.