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^{113}Sn - $^{113\text{m}}\text{In}$ generator with a glass beads column

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The parent nuclide ^{113}Sn decays with a half-life of 115.1 days to produce the daughter nuclide $^{113\text{m}}\text{In}$. $^{113\text{m}}\text{In}$ is a low energy γ -ray emitter with a half-life of 1.16 hours and can be employed in biological, chemical and physical studies. The advantage of this generator system is that $^{113\text{m}}\text{In}$ can be eluted for a long time at sites remote from a reactor or cyclotron facility as ^{113}Sn has a relatively long half-life of 115.1 days.

The present work was undertaken to study the possibility of preparing ^{113}Sn - $^{113\text{m}}\text{In}$ generator with glass beads as adsorbent. The adsorption characteristics of ^{113}Sn () and $^{113\text{m}}\text{In}$ () on glass beads from NaCl solutions were studied. On the basis of these studies, ^{113}Sn - $^{113\text{m}}\text{In}$ generator was prepared by adsorbing ^{113}Sn on the glass beads column. $^{113\text{m}}\text{In}$ was eluted by the 0.16M NaCl solution with pH 3.0, remaining ^{113}Sn adsorbed on the glass beads.