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**Improvement on Manufacturing Process for
Atomized UAl_x Powder**

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ABSTRACT

Uranium metal dispersion particle has been proposed as targets for Mo-99 production to improve the radioisotope production efficiency of conventional low enriched uranium targets. In this study, the manufacturing process for atomized UAl_x powder was improved using UAl_x mother alloys. Atomization without UAl_x mother alloys resulted in leakage of the molten metal owing to severe thermal shock during the mixing of U and Al. We adopted arc melting process for manufacture of mother alloys, thereby UAl_x powder could be stably fabricated without heat of reaction during atomization. The spherical shape morphology and the dendritic structure of the atomized powder was be verified using a SEM. EDX and XRD analyses showed that the UAl_x powder consisted UAl_2 and UAl_3 intermetallic compounds.