

Waste Management in a Hot Laboratory of Japan Atomic Energy Agency - 2: Condensation and Solidification Experiments on Liquid Waste

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Abstract : As a part of STRAD project conducted by JAEA, condensation of radioactive liquid waste containing various chemical compounds using reverse osmosis (RO) membrane filter was examined for efficient and safety treatment of the liquid wastes accumulated inside hot laboratories. NH_4^+ ion in the feed solution was successfully concentrated, and NH_4^+ ion involved in the effluents became lower than target value; 100 ppm. Solidification of simulated aqueous and organic liquid wastes was also tested. Those liquids were successfully solidified by adding cement or coagulants. Nevertheless, optimization in materials for confinement of chemicals is required for long time storage of the final solidified wastes.

Keywords : condensation, radioactive liquid waste, solidification, STRAD project

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