

BRAZIL

<p>1. TITLE AND SUBTITLE</p> <p>Matrix of porous silica for nuclear waste storage</p>	<p>2. TOPIC CODE(S)</p> <p>2.3.2. 2.3.3. 2.3.4. 2.3.5.</p>	<p>BR01</p>
<p>3. AUTHORS OR INVESTIGATORS</p> <p>AGEERTER Michel André and SANTOS Dayse Lara</p> <p>4. ABSTRACT</p> <p>Aqueous simulated solutions of nuclear waste of the Savannah River Laboratory type have been incorporated in porous silica matrices prepared by sigmoidal decomposition of borosilicate glasses of composition SiO₂-B₂O₃-Na₂O. After sintering at low temperature (-1350°C) samples have been characterized by MCC1, MCC2, MCC5, and slugant tests up to 98 days. Total weight loss, pH, integral and differential rates of leaching as well as the total concentrations of Si, Na, B, Ca, Mn, Al, Fe and Ni in the leaching solutions have been determined. The results are compared with those obtained for matrices of fused borosilicate glasses, ceramics, synroc and cements.</p>		
<p>5. NAME AND MAILING ADDRESS OF ORGANIZATION DOING THE WORK</p> <p>Instituto de Física e Química de São Carlos Universidade de São Paulo P.O. Dr. Carlos Botelho, 1465 C.K. Postal 309 13560 - São Carlos - SP - Brasil</p>	<p>6. DESCRIPTORS OR KEY WORDS</p> <p>Vitrification Leaching Waste glass Test MCC1, MCC2, MCC5</p>	
<p>7. ASSOCIATED ORGANIZATION(S)</p> <p>8. SPONSORING ORGANIZATION(S)</p> <p>Comissão Nacional de Energia Nuclear (CEN, Brasil)</p>		
<p>9. DURATION OF PROGRAMME</p> <p>FROM: 01/1982 TO: 12/1985</p>	<p>10. STATE OF ADVANCEMENT</p> <p><input type="checkbox"/> RESEARCH PLANNED <input checked="" type="checkbox"/> RESEARCH IN PROGRESS <input checked="" type="checkbox"/> PRELIMINARY REPORTS AVAILABLE</p>	
<p>11. REFERENCES OF RECENT PUBLICATIONS IN SAME FIELD ISSUED FROM THIS LABORATORY</p> <p>(1) AGEERTER, M.A., VENTURA, P.C.S. and SANTOS, D.L., Vidros porosos de alto teor de sílica para armazenamento de rejeitos nucleares. Parte I: preparação e caracterização de separação de fase espinhela. Cerâmica, 1984.</p> <p>(2) AGEERTER, M.A., VENTURA, P.C.S. and FANTUSI, D.L., Vidros porosos de alto teor de sílica para armazenamento de rejeitos nucleares. Parte II: solidificação, cristalização e lixiviação. Cerâmica, 1984.</p>		

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<p>1. TITLE AND SUBTITLE</p> <p>TREATMENT OF LOW-LEVEL LIQUID WASTES CONTAINING URANIUM USING SODIUM HYDROXIDE</p>	<p>2. TOPIC CODE(S)</p> <p>1.2.2.</p>	<p>BR02</p>
<p>3. AUTHORS OR INVESTIGATORS</p> <p>SUELI da S.Lva, SONIA Helena Valente and MARIA Virginia Teixeira</p> <p>4. ABSTRACT</p> <p>This work describes a decontamination method of acid solutions containing UO₂Cl₂. The precipitation of uranium is obtained with NaOH addition to the radwaste solution at environmental temperature.</p> <p>From the experimental data obtained it was observed that in the pH about 4,0 a greater quantity of uranium was precipitated and in pH above 4,0 the precipitate was partially solubilized.</p> <p>Nowadays, we study the influence of pH and temperature on the precipitation of uranium VI in radwaste solutions with NaOH as well as the compounds obtained in the various stages.</p> <p>This method showed a decontamination factor of about 94,7% and, as a whole, it is viable.</p>		
<p>5. NAME AND MAILING ADDRESS OF ORGANIZATION DOING THE WORK</p> <p>INSTITUTO DE ENGENHARIA NUCLEAR CAIXA POSTAL 2186 CIDADE UNIVERSITÁRIA - ILHA DO FUNDÃO 20001 - RIO DE JANEIRO - RJ - BRASIL</p>	<p>6. DESCRIPTORS OR KEY WORDS</p> <p>WASTE PROCESSING WASTE DECONTAMINATION URANIUM CHLORIDES PRECIPITATION SOLIDIFICATION</p>	
<p>7. ASSOCIATED ORGANIZATION(S)</p> <p>COMISSÃO NACIONAL DE ENERGIA NUCLEAR RUA GAL. SEVERIANO 90 22290 - BOTAFOGO - RIO DE JANEIRO - RJ - BRASIL</p> <p>8. SPONSORING ORGANIZATION(S)</p>		
<p>9. DURATION OF PROGRAMME</p> <p>FROM: 09/1985 TO: 08/1988</p>	<p>10. STATE OF ADVANCEMENT</p> <p><input type="checkbox"/> RESEARCH PLANNED <input checked="" type="checkbox"/> RESEARCH IN PROGRESS <input type="checkbox"/> PRELIMINARY REPORTS AVAILABLE</p>	
<p>11. REFERENCES OF RECENT PUBLICATIONS IN SAME FIELD ISSUED FROM THIS LABORATORY</p>		