Ain Shams University
Faculty of Science

IMMOBILIZATION AND SOLIDIFICATION OF SOME LOW AND INTERMEDIATE LEVEL RADIOACTIVE WASTES IN SOME PETROLEUM PRODUCTS

A PhD Thesis Submitted

By

Eman Ahmed Youssef Mohammed

M. Sc. (Physical and Inorganic Chemistry)

To

Chemistry Department
Faculty of Science
Ain Shams University

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For
Degree doctor of philosophy of Science
(Chemistry)

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Approval Sheet for Submission

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بسم الله الرحمن الرحيم

"وعلمك مالم تكن تعلم وكان فضل الله عليك عظيما"

صدق الله العظيم

سورة النساء (آية: ١١٣)

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List of abbreviations

The following Table describes the significance of various abbreviations used throughout the thesis.

Abbreviation	Meaning
SAM	Polyacrylamide stannic (IV) silicate
FAM	Polyacrylamide stannic (IV) antimonate
NORAM	Polyacrylamide stannic (IV) silicoantimonate
ΔG^o	free energy changes
D	diffusion coefficient
EPA	Environmental Protection Agency
ΔS^o	entropy changes
OPC	Ordinary Portland Cement
IEC	Ion exchange capacity
k_d	distribution coefficient
C_e	the equilibrium concentration of the ions in the solution (M)
C_{ads}	the amount sorbed onto the sorbent
CLF	cumulative leach fraction
DOE	Department Of Energy