Microbiological treatment of selenium containing materials

Thesis
Submitted for the award of the degree of doctor philosophy in microbiology
By

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(M.Sc. Microbiology, 2010)

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Approval sheet

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This dissertation has not been previously submitted for any degree at this or at any other university

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بِسْمِ اللهِ الرَحْمَنِ الرَحِيم

قَالُوا سُبْحَانَكَ لاَ عِلْمَ

لَنَا إِلا مَا عَلمْتَنَا إِنكَ

أَنْتَ العَلِيمُ الحَكِيمُ

صدق الله العظيم

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF PHOTOS

ABBREVIATIONS

CFU	Colony Forming Units
EBM	Enrichment basal medium
EDTA	Ethylenediaminetetraacetic acid
EPA	Environmental Protection Agency
g	Gram
HGT	Horizontal gene transfer
NAS	Nutrient agar medium supplemented with 5 mM of sodium selenite
mg	milligram
ml	Milliliters
mM	Millimolar
µg	Microgram
µ moles	Micromoles
nm	Nanometer
PCR	Polymerase Chain Reaction
Se°	Elemental selenium
Se IV	Selenite
Se VI	Selenate
TBE	Tris/Borate Electrophoresis (buffer)
TE	Tris/EDTA (buffer)
trxB	Thioredoxin reductase type B
TEM	Transmission Electron Microscope