Faculty of Science

Studies on Bioremediation of Toxic Heavy Metals in Agricultural Soil Ecosystem

Thesis

Submitted for the Ph. D. degree of science

"Microbiology"

By

Doaa Ali Elsayed Ismael

M.Sc. (2013) in Microbiology

Department of Microbiology

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This thesis has not previously been submitted for any other universities.

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AM	Arbuscular mycorrhizae
DNA	Deoxy Ribo Nucleic Acid
DTPA	Diethylen Triamine Penta Acetic Acid
EC	Electrical conductivity
FAO	Food and Agriculture Organization
HMs	Heavy metals
ITS	International Transcribed Spacer
KB	Kaolinite and Bentonite
µg	Micro- gram
MCC	Mixed culture consortium
PCR	Polymerase Chain Reaction
P.D.B	phosphate dissolving bacteria
PGPB	Plant growth promoting bacteria
PGPY	Plant growth promoting yeast
PTEs	Potential toxic elements
ppm	Part per million
RP	Rock phosphate
rRNA	Ribosomal Ribo Nucleic Acid
TBE	Tris borate- EDTA
TPF	Tri-phenyle formazan
WHO	World Health Organization