بِسْمِ اللهِ الرَّحْمنِ الرَّحِيمِ

"وَقُلِ اعْمَلُوا فَسَيَرَى اللَّهُ عَمَلَكُمْ وَرَسُولُهُ
وَالْمُؤْمِنُونَ وَسَتُرَدُّونَ إِلَى عَالِمِ الْغَيْبِ
وَالشَّهَادَةِ فَيُنَبِّئُكُمْ بِمَا كُنْتُمْ تَعْمَلُونَ"

صدَقَ الله العَظِيم

(التوبة: 105)

Detection, optimization of nitrate reductase enzyme and its application in wastewater treatment

*A Thesis*Submitted for the degree

Of

PhD of Science in Microbiology

By

MarwaMoustafa Hassan Eltarahony

B.Sc. in Microbiology (2003) – Faculty of Science – Alexandria University
M.SC. in Microbiology (2007) - Faculty of Science – Alexandria University

Under Supervision of

Dr. Desouky A. Abd El-Haleem

Professor in the Environmental Biotechnology Department, Genetic Engineering Institute, City for scientific research and technology applications

Dr. Zeinab M. H. Kheiralla

Professor of Microbiology College of women for art, science and education Ain Shams University

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Botany Department

College of Women for Arts, Science and Education

Ain Shams University

2016

Declaration

I declare that this thesis has been composed and the work recorded here has been done by me.

It has not been submitted for any other degree at this or any other university.

Marwa

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&

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