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Total nucleic acids extraction, purification and cDNA synthesis from soil

Roey Angel[1]

[1]Soil and Water Research Infrastructure

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SoWa RI Anaerobic and Molecular Microbiology (public)
Tech. support email: eva.petrova@bc.cas.cz

Roey Angel
Soil and Water Research Infrastructure

ABSTRACT

Extraction of DNA, and especially RNA from soils, can be challenging due to the presence of organic impurities, which can inhibit downstream enzymatic reactions and the fact that many soil microorganisms are dormant or nearly inactive and hence hard to lyse. The following collection of protocols describe a robust and flexible pipeline for extracting high amounts of pure DNA and RNA from nearly all types of soils. The methods have been successfully tested for mineral and highly organic soils and soils with very low biomass.

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FILES

Total Nucleic Acids Extraction from Soil
Version 6
by Roey Angel, Soil and Water Research Infrastructure

Purification of RNA from a DNA/RNA Extract
Version 2
by Roey Angel, Soil and Water Research Infrastructure

Qant-iT™ PicoGreen® dsDNA Quantification
Version 1
by Roey Angel, Soil and Water Research Infrastructure

Quant-iT™ RiboGreen™ RNA Quantification
Version 2
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cDNA synthesis using SuperScript™ IV
Version 2
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