

Resource Summary Report

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RNA Isolation from Plant Tissue Protocol 9: CTAB/Acid Phenol/Silica Membrane Method

DOI:10.17504/protocols.io.4yegxte

Type: Protocol

Proper Citation

Eric Carpenter 2019. RNA Isolation from Plant Tissue Protocol 9: CTAB/Acid Phenol/Silica Membrane Method. protocols.io dx.doi.org/10.17504/protocols.io.4yegxte

Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.4yegxte>

Authors: Eric Carpenter

Group: GigaScience Press

Summary: Implemented by: Henrietta Myburg and Marc Johnson This protocol is a modification of protocol 8. It was developed after protocol 8 and several commercially available plant RNA isolation kits failed to produce a sufficient yield and quality of RNA from *Oenothera* spp. (Onagraceae) for next-generation sequencing. *Oenothera* are rich in polysaccharides, oils, flavonoids and complex ellagitannins that likely interfere with isolation. We suspect that this protocol will be most useful for species and tissues with complex secondary chemistry and rich in oils (e.g. some Rosaceae and Pinaceae). The most important modifications to this protocol versus Protocol 8 is the use of less plant tissue, more extraction buffer, and repeating solvent extractions until the interphase is clean of debris. The protocol is regrettably longer and more involved than Protocol 8. We attempted to remove or reduce the replication of the solvent extractions steps without success (i.e. yield and quality are always decreased in *Oenothera* when any steps are removed). This protocol is part of a collection of eighteen protocols used to isolate total RNA from plant tissue. (RNA Isolation from Plant Tissue Collection: <https://www.protocols.io/view/rna-isolation-from-plant-tissue-439gyr6>)

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