

RAPID AND RELIABLE METHOD FOR HIGH QUALITY RNA ISOLATION FROM MAJOR SEED SPICES

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Abstract: In plant molecular biology, isolation of high quantity with best quality of RNA is a crucial technique. The quality of RNA determines the reliability of downstream process like real time PCR. Isolation of RNA from seed spice crops is in itself a major challenge as there is an abundance of polysaccharides and oleoresin in the plant material. Three major seed spices Fenugreek, Coriander and Fennel were considered for this study. For all seed spices, where conventional isolation procedures gave poor results the present study describes a modified and more consistent method, which yields a greater quantity of RNA compared to the use of conventional protocols for seed spices. The protocol, in the present paper yielded 1.2-2.7 µg of RNA per 100 mg of fresh tissue and took only 3 hrs to complete. In spite of the quantity, RNA obtained was of high quality and proved suitable to RT-PCR.

Keywords: Seed spices, Coriander, Fennel, Fenugreek, RNA, RT-PCR, Nano-drop

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