

(54) Title of the invention : A COMPREHENSIVE HIGH-QUALITY RNA EXTRACTION PROTOCOL FOR A RANGE OF VARIETIES AND TISSUE TYPES OF THE LEGUMINOUS CROP PIGEONPEA

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(57) Abstract :
 This study optimized RNA isolation from pigeonpea by comparing conventional and modified methods. High-quality RNA was successfully extracted from healthy and Fusarium udum (FU) Butler inoculated pigeonpea seedlings, validated by RT-PCR for Ascorbate peroxidase (APX) and FU-specific Cellobiohydrolases (CBHs) genes. The protocol's excellence was achieved through Guanidium thiocyanate (GITC) and sodium citrate-based lysis buffer for efficient extraction and isopropanol/sodium chloride for precipitation. This optimized approach promises superior RNA yield from polysaccharide and polyphenol-rich pigeonpea plants, facilitating the identification of rare transcripts and molecular-level exploration of plant-pathogen interactions.

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