**Efficiency of RNA storage solution for RNA Isolation from *Jatropha gossypiifolia* L. Leaves**

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**Abstract**

The purpose of this study was to compare the performance of three types of RNA storage solution, solution A (50 mM Tris–HCl (pH 7.5), 10 mM MgCl₂, 0.1 mM EDTA (pH8.0) and 7 mM 2-mercaptoethanol), B (10 mM Tris–HCl (pH8.0) and 1 mM EDTA (pH8.0) ) and C (10 mM Tris–HCl (pH8.0), 1 mM EDTA (pH8.0), and 0.5% (w/v) sodium dodecyl sulfate (SDS) ) for RNA extraction from leaves of *Jatropha gossypiifolia* that had stored for 1, 3, 5 and 7 days at 4°C. The result showed that a concentration of RNA after collecting in RNA storage solution A were 2060.00, 1970.20, 1992.80 and 1712.20 µg/ml respectively, solution B were 1451.40, 1494.20, 1668.20 and 1445.40 ng/µl respectively, and solution C were 1136.40, 1310.80, 1149.20 and 1027.00 ng/µl respectively. The efficiency of each extracted RNA sample in three types RNA storage solution was further confirmed by cDNA synthesis and PCR using Actin gene primers. cDNA was synthesized from RNA extraction after collecting in RNA storage solution A that produced the highest quality and yields of PCR products. These results revealed that the RNA extraction using Actin gene primers from *Jatropha gossypiifolia* leaves in RNA storage solution A had the most efficient solution.

**Key words:** RNA storage solution, *Jatropha gossypiifolia* L., RNA Isolation