# Rapid and effective method of RNA isolation from green microalga Ankistrodesmus convolutus


## Abstract

The rapid and effective method for the isolation of RNA from green microalga Ankistrodesmus convolutus based on homogenization in a simple CTAB buffer and selective precipitation of RNA with lithium chloride is developed. This procedure avoids the use of toxic chaotropic agents and phenol while high concentration of dithiothreitol is used to inhibit RNase activity and prevent oxidative cross-linking of nucleic acids by phenolics. The extraction procedure was able to produce high quality and intact RNA from A. convolutus. The yield of total RNA was 0.69–0.73 mg/g of fresh weight, with A260/A280 ratio of 1.79–1.86. The obtained RNA was of sufficient quality and suitable for downstream application such as RT-PCR and cDNA library construction. The procedure may also have wider applicability for total RNA isolation from other green microalgae species.



**Keyword:** Ankistrodesmus convolutus; cDNA library; Green microalga; RNA isolation; RT-PCR; Northern blot.