

**PREPARATION OF AMPLIFIED ITS REGION IN
NUCLEAR RIBOSOMAL DNA OF *Alpinia galanga*
(L.)Sw. (MAHA ARATTA) AND RELATED SPECIES
FOR DNA BARCODING**

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ABSTRACT

Alpinia galangal (L) Sw. (Maha aratta) of family Zingiberaceae is one of the valuable medicinal plant in traditional medicine system. There are some morphologically similar plants to *Alpinia galanga* and the dried rhizome is the commercial valuable part of this plant which is almost same in these and it leads to confusion in morphological identification. Thus, adulteration causes a major problem in the industry. This study was to prepare the DNA samples for DNA barcoding to identify the plants in molecular level. *Alpinia galanga* and related species were collected and identified using the morphological characters of the leaf and inflorescence. Young fresh leaves were taken to DNA extraction using Qiagen DNA mini plant kit. Extracted genomic DNA was Gel electrophoresis and quantified. Purity of the DNA was confirmed through restriction digestion. Nuclear ribosomal DNA internal transcribed region was amplified using specific primers *Alpinia* F and R. *Alpinia galanga* and related four species ; *Alpinia calcarata* (Heen aratta) , *A. malaccensis* (Ran kinihiriya), *Hedychium coccineum* (Kaula Ala), *Hedychium coronarium* (Elamal) were collected and established. Adequate amount of quality pure genomic DNA can be obtained by using Qiagen mini plant kit for downstream process of DNA barcoding. Amplification of Nuclear ribosomal DNA in internal transcribed region should be further optimized.

(Key words: *Alpinia galanga*, Identification, Related species, Adulteration, DNA barcoding)