Molecular Identification of Yeast Strains in Dried Flowers of *Woodfordia fruticosa*

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Abstract

Dried flowers of *Woodfordia fruticosa* (Sinhala: Malitha) are used in the preparation of Arishta. It has been recorded that these flowers facilitate the fermentation process of Arishta. The main objective of the present study was to identify the yeast strains contained in dry *W. fruticosa* flowers. These yeast strains are not only responsible for the fermentation but also in biotransformation processes. However, yeast strains contained in dry *W. fruticosa* flowers have not yet been identified at the molecular level. In the present study we used dry *W. fruticosa* flowers imported from India available in the open market. In total 33 yeast strains were isolated from *W. fruticosa* flowers and colony characters of all isolated yeast lines found to be similar. The molecular identification of yeast species was carried out by using RAPD-M13 PCR profiles and analysis of amplified ITS1-5.8S-ITS2 region of these yeast lines. *Saccharomyces cerevisiae,* a type strain, was used to determine whether *S. cerevisiae* is present or not. According to the results of ITS region analysis, the yeast strains isolated from dry *W. fruticosa* flowers were not *S. cerevisiae*. The species level identification of one of these yeast strains was carried out by sequencing of ITS1-5.8S-ITS2 region and comparison with the sequences in NCBI database. According to the sequence analysis the yeast strains in dry *W. fruticosa* flowers were identified as *Candida tropicalis.*

Keywords: *Woodfordia fruticosa*, yeast; M13-RAPD PCR; ITS1-5.8S-ITS2 region; ITS1-5.8S-ITS2 region sequence