



AI-04

Molecular identification of yeast strains in three different "Arishta"

M. M. N. D. M. Bandara¹, S. Hettiarachchi¹, G. A .S. Premakumara²,
P. Ranasinghe² and S. Abeysinghe¹

¹Dept. of Botany, Faculty of science, University of Ruhuna, Sri Lanka

²Herbal Technology division, Industrial Technological Institute, Colombo 07, Sri Lanka

In Sri Lanka "Arishta" is prepared from medicinal plant materials and it is well known as "Herbal wine". Arishta is particularly interesting because of its medicinal value. Different flowers are used in order to provide yeast strains needed for fermentation and biotransformation processes in Arishta. However, yeast strains involved in preparation in local arishta have not been identified at the molecular level until this investigation. The *Saccharomyces cerevisiae* is the well known yeast species which is used in many industries. Therefore the main objective of the present study was to determine whether *Saccharomyces cerevisiae* is involved in fermentation in Arishta. Hence the identification of yeast strains present in Arishta was carried out during its fermentation process. In the present study three different Arishta was used i.e. Ashwagandha, Nimba and Dasamula. In total, 33 yeast isolates were isolated from three different Arishta. The molecular identification of yeast species was carried out by RAPD-M13 PCR profiles and analysis of amplified ITS1-5.8S-ITS2 region of selected yeast lines. *Saccharomyces cerevisiae*, a type strain, was used to determine whether *Saccharomyces cerevisiae* is present in the fermentation process. According to results of ITS region analysis, the yeast strains isolated from Arishta were not *Saccharomyces cerevisiae*. Therefore, the species level identification of this yeast strain in Arishta was carried out by sequence of ITS1-5.8S-ITS2 region and comparison with the sequences in NCBI database. According to the sequencing analysis the yeast strains in "Arishta" were identified as *Candida guilliermondi* which is the vegetative stage of *Pichia ohmeri*.

Keywords: Arishta, yeast, M13-RAPD PCR, ITS1-5.8S-ITS2 region, ITS1-5.8S-ITS2 region sequence