

WINE PRODUCTION FROM RIPENED KARONDA FRUITS USING *SACCHAROMYCES CEREVISIAE*

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ABSTRACT: The present study was carried out with the objectives of analysing the major chemical constituents of Karonda fruits related to wine production. Various experiments were conducted to optimize the fermentation variables for maximum yield of alcohol in fruit wine using *Saccharomyces cerevisiae* MTCC170 and then evaluated for various sensory quality characteristics. Firstly different chemical constituents of karonda fruit pulp were analysed. Karonda fruit pulp was found to contain a fair amount of TSS required for bioconversion into alcohol. Secondly, to get maximum recovery of alcohol yield in fruit wine, initially incubation period was optimized at standard TSS of 22°Brix, incubation temperature of 30°C and pH of 3.5 (original pH of karonda fruit juice) with different ranges of incubation period viz. 24, 48, 72, 96, 120, 144, 168 and 192 hr. In this study, the higher yield (6.9%) of alcohol was recorded at incubation period of 168 hr with TSS of 22° Brix and found the same at further incubation period of 192 hr. The results of various experiments revealed that the culture of yeast (*S. cerevisiae* MTCC 170) gave maximum yield of alcohol (7.8%) at TSS level of 22°Brix, pH of 4.0 with maintaining the incubation temperature of 27°C and incubation period of 168 hr. The sensory quality evaluation of karonda fruit wine revealed that karonda fruit wine sample "A" with alcohol yield of 7.8% was found to be more acceptable with respect to all the sensory attributes in comparison to other samples of karonda wine.

Keywords: *Karonda fruits, wine, Saccharomyces cerevisiae MTCC 170, TSS, Sensory attributes.*

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