

**VALUE ADDITION TO BLACK TEA BY
RESUPPLYING VOLATILE COMPOUNDS
EXTRACTED FROM FERMENTED TEA**

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ABSTRACT

During tea processing, various types of chemical compounds are formed in tea leaves due to some chemical changes. Considerable amount of volatile compounds which formed during the fermentation process are lost during the drying process of tea manufacturing. The aim of this study was to develop a value added black tea by re-supplying extracted volatile compounds from fermented tea dhoor and to enhance the fresh and natural aroma coming out of black tea after brewing.

The extraction of volatile compounds as a liquid from fermented tea dhoor was done by drying the fermented tea dhools and condensing the evaporating components. The extracted liquid volatile compounds were added to black tea as 1% and 2%. Since this was a consumer oriented product for the international market, four factors each in two levels were considered which always encounter the consumer. Brewing method of tea (Lid open and Lid closed), mesh type of tea bag (Filter paper and Nylon), tea particle size (BOPF and PEKOE) and the applying amount of the extracted liquid (1% and 2 %) were the selected factors. The effects of these selected factors were determined by using sixteen treatments. A sensory evaluation was conducted by using nine experienced tea tasters and the best treatment was selected. All the treatments were undergone for a storage study by observing the appearance, aroma and moisture content of black tea for six weeks.

PEKOE grade tea incorporated with 1% liquid volatile compounds, packed in filter paper tea bag and brewed with open lid was identified as the best treatment combination. Incorporation of volatile compounds to black tea significantly enhanced the aroma and the flavour of black tea when brewed. Although the extracted liquid of tea volatile compounds had a good aroma, incorporation of liquid volatile compounds to black tea did not produce a similar degree of aroma after brewing. Any defect in volatile compounds incorporated tea did not encounter during the storage period of six weeks. The study shows that the organoleptic properties of black tea can be improved by resupplying the extracted liquid volatile compounds from fermented tea during the drying process.

Key Words: Tea, Value Addition, Fermented Dhoor, Volatile Compounds, Tea Aroma, Tea Flavour