

**SCREENING OF EXOTIC TEA GERMPLASM ON  
SUITABILITY FOR GREEN TEA MANUFACTURING**

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## ABSTRACT

Demand for green tea consumption has gone up among the local consumers. Thus, tea growers look for cultivars suitable for green tea production. Studies were conducted to screen tea germplasm on suitability for green tea manufacturing aiming developing cultivars. Twenty six accessions from the germplasm representing exotic collection, recommended cultivars and estate selections were used. Two and a bud was picked from plants and green tea was prepared using an optimized hand processing method involving following steps; steaming to deactivate enzymes, hand rolling and pan frying, twisting and drying. Sensory evaluation on quality of ungraded green tea was done by professional tea tasters. Accessions were grouped based on the average ratings given for individual quality parameters; dry leaf: appearance, aroma, infused leaf: appearance, aroma, liquor: appearance, aroma, colour, taste using average linkage cluster analysis. Resultant dendrogram clustered accessions in to four major groups. First group comprised of CH13, estate selection and six accessions for Sri Lankan green tea production. And all those accessions were rated as producing high quality green tea. The second group consisted of TRI 4067 recommended cultivar and six other accessions for Sri Lankan green tea production which are also considered as good accessions for quality green tea. An attempt was made to correlate biochemical parameters and green tea quality and results warrants that high amino acid and low polyphenol and caffeine content contribute to the quality of green tea. This is the first attempt on screening tea germplasm for developing a Sri Lankan green tea cultivar.

**Key Words:** Green tea, sensory evaluation, exotic tea germplasm, polyphenol, caffeine