

**STUDY ON QUALITY REJECTS OF CHEMICALLY  
TREATED COLD WATER SOLUBLE INSTANT TEA  
(SAINT DARK)**

A dissertation submitted to the  
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## ABSTRACT

Study was carried out at Unilever Instant Tea Factory to study on chemically treated cold water soluble instant tea. The objective was, 18% of quality rejects of chemically treated cold water soluble instant tea were rejected during 1<sup>st</sup> quarter in 2012 and it is mainly on haziness of product. Chemically treated cold water soluble instant tea manufacturing process was investigated to minimize the quality rejects mainly on haze at Unilever Instant Tea factory. Colour and haze of tea cream are playing a vital role for determining process parameters.

Tea cream solubilization process (reaction) is much more important to reduce haziness of product. The most frequent cause of hazes in instant tea beverages is due to protein-polyphenol interaction. Study about reaction parameters were done and identified caustic soda percentage, reaction time (tea cream solubilization) and dry solid (D/S %) were the most critical factors that affected to the haze of the product. When reaction time increase haziness of the product was decreased and as well colour becomes dark. When caustic soda percentage increases haziness of product was decreased and reacted cream become light in colour.

The standardize parameters of the Tea cream solubilization process include 29% of caustic soda and 75 minute of reaction time. The dry solid percentage plays a vital role to reduce haze of reacted cream. The reaction completed successfully when the dry solid percentage was more than 13. Centrifuging process causes to decrease haze by 1 unit. Evaporation and spray drying processing steps caused to increase haze by 2 units and it diminishes lower the haze to 11NTU in final powder. There were considerable savings by company this method.

Process for making chemically treated cold water soluble instant tea (saint dark) in this method was with good clarity and colour.