

**RELATIONSHIP BETWEEN SENSORY QUALITY
AND THE TYPE OF PACKAGING MATERIALS
USED IN UHT MILK**

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by

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Abstract

Ultra high temperature milk is one of the most popular liquid products in local market. Several kinds of packaging materials are used as UHT milk packaging materials. Mainly multi layer polyethylene packaging materials such as three layer UHT milk film, five layer UHT milk film and seven layer UHT milk film are used as UHT milk packaging materials due to low cost and the ease of handling. The aim of this study was to find out the best multilayer polyethylene packaging material which has low volatile absorption property. UHT milk with different packaging materials was prepared according to give transportation conditions with different treatments. 24 hours time period was used as maximum transportation time period. According to sensory evaluation results, treatment time periods were limited to get better results. There were four different treatments which include carbolic soap treatment, incense sticks treatment, red onion treatment and vitamin B tablet treatment. Treatments were selected according to the consumer complaint records in MILCO (Pvt) Ltd. Best packaging material which has less volatile absorption property was selected by sensory evaluation using eight trained consumer panelist after every treatment time periods. Five point hedonic scale was used to asses sensory attributes such as taste, aroma, mouth feel and deviation from the basic UHT milk sample. Sensory data were analyzed by Friedman nonparametric statistical method in Minitab 15 soft ware. Microbiology analysis was conducted to find out the microbiology changes due to volatile absorption. There were no microbial changes due to volatile absorption in UHT milk samples. Approximate costs for the three different multilayer polyethylene packaging materials were calculated. Three layer UHT milk film showed low cost than other two packaging materials. UHT milk with seven layer UHT milk film showed higher ($P < 0.05$) preference with most sensory attributes. Based on the results it can be concluded that UHT milk with seven layer packaging material was the best packaging material which has low volatile absorption property.