

IDENTIFICATION OF MOISTURE LOSS AND WEIGHT DROP OF THE SOAP TABLETS DURING SHELF LIFE

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Soap which comes under health care category is one of the fastest growing segments in the current market. Consumers are educated on what they purchase. Quality is the key feature to expand and maintain a loyal customer base. Each and every competitive product includes different ingredients depending on its trade name and category. There are specific moisture level and a weight for each soap category at the time of manufacturing. And these levels are expected to remain unchanged during its shelf life of 24 months. However, when the soap tablets are distributed to the market, they are stored in different conditions which result in moisture evaporation. As a result of this moisture evaporation, soap tablets lose their weight and deviate from the specified levels creating customer dissatisfaction. Therefore, this research was carried out with the objective of identifying the percentage of moisture level and weight drop during the shelf life of the soap tablets. The research was conducted on randomly selected 24 soap tablets from each of three main soap categories which are laundry, bathing and baby soap in order to test the moisture and the weight loss with time. The initial weight of each soap tablet was measured and then stored in a condition which is similar to the actual market storage conditions such as a shelf. Two soap tablets from each soap category were taken from storage at the end of each week for testing and they were removed from the storage after testing. The moisture and weight of the soap were measured using laboratory equipment for three months' period. Statistical analyses were conducted using SPSS and the findings showed that weights of the soaps were dropped gradually. About 5% of the initial weight and 11% to 16% of initial moisture level were lost in the laundry soap category and between 4% to 7% of the initial weight and 19% to 28% of initial moisture were lost at the end of three months in bathing soaps. This indicates that the packaging materials and the storage strategies need to be revised to maintain the quality of soap which provides value and return for whole marketing strategies.

Keywords: Moisture loss, Shelf life, Soap, Weight drop