ABSTRACT

Curd is a fermented milk product obtained from coagulation of cow or buffalo milk or a mixture of there of by the agency of the Lactic acid bacteria. MILCO (Pvt) Ltd manufactures curd under brand name "Highland" and *Lactobacillus bulgaricus*, and *Streptococcus thermophillus* are used as starter culture. Because of its high acidity and low pH, curd is mainly spoiled by organisms such as yeasts and moulds. It has been realized that yeast and mould development in curd pots greatly affected the relatively lower demand for "Highland" curd in present market.

The results of analyzed data revealed yeast and mould growth mainly occur while storing the curd in room temperature. The study involves the identification of points in production line that are highly vulnerable to contamination by yeasts and moulds. Pour plate method and swab testing were used to count the yeasts and moulds. The results revealed that in production line, major contamination source is empty pot and others are filling tube, polyethylene lid and air. Colony characteristics of genus *Aspergillus, Geotrichum* and *Penicillium* were identified in curd using streak plate method and it was confirmed by analyzing morphological characteristics.

Yeasts and moulds present in the empty clay pot were studied for their tolerance for various treatments. The least yeast and mould count for swab test and maximum shelf life of curd was observed from each of following three methods; direct heating the pot on LP gas burner for 10 minutes, washing the pot with 5 % Potassium sorbate solution and heating the pot in hot air at temperature $\geq$ 110 ^{0}C for 25 minutes. Through various studied time periods yeasts and moulds present in filling tube were eliminated by steaming the tube for 14 minutes. Yeast and mould count of polyethylene lid was reduced up to zero by washing with 2 % Potassium sorbate solution among various studied concentrations. Through various percentages the best potassium sorbate percentage for add to curd formula as antifungal agent was selected using sensory evaluation and the results showed 0.01% Potassium sorbate level is best. Results showed tight closing of pot with polyethylene lid increases shelf life.

The results revealed that the combination of all discussed preventive measures increased the shelf life of curd pots up to 8 days in room temperature.