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The Quality of Syrian Shanklish a Traditional Dairy Product

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Abstract

Shanklish is an important dairy product in the Middle East, particularly in Syria, Lebanon and Turkey. It is used in the traditional cuisine as main component on a daily basis especially in the harsh mountainous coastal regions, where it is difficult to make a living from agriculture. Shanklish is typically formed into 6 cm diameter balls and ripened in jars for two months. Due to the mold growth during the ripening process the end product may contain aflatoxins, which is seen as one of the major etiological factors in the development of hepatocellular carcinoma. To address this problem a survey was carried out in the Syrian mountain region where Shanklish is mainly produced.

Twenty eight Shanklish samples were collected from nine villages at different ripening stages. The traditional processing methods were observed and documented. The chemical composition and aflatoxin content were determined.

It was found that 66% of the farmers in the study area, process all their milk into Shanklish, and another 22% process 50% of their milk. The average Shanklish produced per farm is 114 kg per year. Almost 27% of the farmers face a problem of crumbling due to overheating of butter milk which negatively affects Shanklish texture. Product spoilage due to elevated product moisture was observed in 11% of farms.

The content of fat was affected by location and varied from 4.4 to 12.7% reflecting a low efficiency of churning. Total solids and protein also varied from 50.2 to 57.3% and from 30.7 to 42.3% respectively, according to different processing practices. The total aflatoxins in the collected samples varied between locations from 0.22 to 2.55 $\mu\text{g kg}^{-1}$. Due to the heavy aflatoxin contamination Shanklish from eight out of nine locations did not meet the standards of the United States Food and Drug Administration. Improvements in processing practices and hygiene can overcome the observed problems of Shanklish quality.

Keywords: Aflatoxins, shanklish, traditional dairy products