

## Lactic biodiversity of black carrot based traditional Turkish fermented beverage

Ceren Daskaya-Dikmen

Istanbul Technical University, Turkey

Shalgam juice is a black carrot based traditional Turkish fermented non-alcoholic beverage. It has red color and sour soft taste. Its consumption is common in the east side of the Mediterranean of Turkey. The dominant micro flora in shalgam juice is lactic acid bacteria (LAB) with probiotic potential. In this sense, the aim of this study is to evaluate the lactic biodiversity of shalgam juice based on manufacturing technology. Shalgam juice is made of turnip, black carrot, bulgur (broken wheat), flour, salt and water. As locally, shalgam juice is produced homemade. However, commercial manufacturing is developed recently. Commercial production is divided into two different techniques which are the traditional and the direct method. There are two fermentation stages, sourdough fermentation and carrot fermentation, in the traditional method. On the other hand, only carrot fermentation occurs in the direct method. Depending on manufacturing technology and fermentation, lactic micro flora varies accordingly. *Lactobacillus plantarum* was found as the most dominant LAB during the first and second fermentations. Along with *L. plantarum*, *Lb. brevis* and *Lb. paracasei* subsp. *paracasei* were found at all fermentation stages in shalgam juice by traditional method. The isolation of *Lb. plantarum*, *Lb. paracasei* subsp. *paracasei*, *Lb. brevis*, *Lb. fermentum*, *Lb. pentosus*, *Lb. buchneri*, *Lb. delbrueckii*, *Leu. mesenteroides* and *Pediococcus* spp. were reported during the fermentation in the shalgam juices by two methods. The lactic acid micro flora of shalgam juice is an important issue. It is possible to develop product with high nutritional value through selection of appropriate cultures.

### Biography

Ceren Daskaya-Dikmen has completed her M.Sc. from Food Engineering Department of Istanbul Technical University (ITU). She is now Ph.D. student and research assistant at ITU. She has participated in the organization of 23<sup>rd</sup> International ICFMH Symposium, Food Micro 2012. She is currently working on prevention of mycotoxins by lactic acid bacteria.

daskayac@itu.edu.tr