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## Enhancement of antioxidant properties of traditional dairy products with the addition of dried fruits

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### Abstract

The antioxidant potential of foods plays an essential role in the diet of people since an antioxidant-rich diet may inhibit the negative impact of free radicals.

Fruits and berries have high antioxidant activity, due to the content of vitamin C, E, carotene and polyphenol. Casein and other antioxidant enzymes; lactoferrin; conjugated linoleic acid; coenzyme Q10; vitamins C, E, A and D3; equol; uric acid; carotenoids; and mineral activators of antioxidant enzymes of milk also have antioxidant activity. These antioxidants act at different levels of cell defense against free radicals.

In recent years, ethnic products have been gaining popularity in Kyrgyzstan. Ayran, Suzmo, and Kurut are ethnic fermented milk products. Suzmo and Kurut are rich in proteins, which are obtained by dehydration of fermented milk product - Ayran. In order to expand the range of sour-milk products based on Ayran and enhance their antioxidant activity, within the framework of this study, four new recipes of sweet sour-milk Ayran products with the addition of fruit fillers were developed. Dried apricot and pomegranate peel powder were used as fruit fillers. The pomegranate peels were collected from fresh pomegranate juice vendors and dried apricots were obtained in local markets in Bishkek, Kyrgyzstan. Four new recipes were developed: 1) Ayran + dried pomegranate peel 2) Suzmo + dried pomegranate peel 3) Kurut + dried pomegranate peel 4) Suzmo + dried apricots puree. The antioxidant activity and other physicochemical parameters of new developed dairy products with and without fruit fillers were determined.

DPPH (2,2-diphenyl<sup>-1</sup>-picrylhydrazyl) assay was used to determine antioxidant activity. The inhibitory ability of Ayran and Suzmo with the addition of dried pomegranate peel and dried apricot was significantly higher compared to fermented milk products without fruit fillers. Thus, it can be concluded that the potential for using dried pomegranate peel and apricot to enhance the antioxidant properties of traditional dairy products is high.

**Keywords:** dried pomegranate peel, ayran, dried apricot, Kurut, Suzmo