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Integral antioxidant activity of kefir for baby food from different manufacturers

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Abstract

In this paper, authors studied the integral antioxidant activity of kefir for baby food and the effect of the product's expiry date on this indicator. The integral antioxidant activity of kefir was determined on an "Expert-006" coulometer using coulometric titration with electro-generated bromine using rutin as a standard. The following points were chosen as control points for carrying out analytical work: release date, end of the expiry date, the period of time during which the food product, subject to storage conditions, must retain all of its properties specified in the regulatory documentation and a week after the expiration date. Such a trip allows us to determine a sample of fermented milk products that is distinguished by the highest biochemical value and high-quality preservation, and also to identify the brand of kefir for baby food and, as a result, the manufacturer, who should be preferred when buying goods. The object of the study in this work was several kefirs for children produced by OJSC «Zelenodolsk milk processing plant», OJSC «Lactis», LLC «Wimm Bill Dann». Studies have shown that the highest initial antioxidant activity was characterized by all control samples of kefir brand «For Babies» with the lowest declared expiry date. Moreover, an increase in the declared expiry date of sour-milk products led to a decrease in the value of the above indicator. A similar trend was observed when studying changes in the biochemical value of all studied samples during storage. The effect of storage duration on the integrated antioxidant activity of commercial products was evaluated by the level of its decrease (%) at the time of determination relative to its initial value. It was revealed that the kefir produced by OJSC «Zelenodolsk milk processing plant" had the highest integral antioxidant activity and was subjected to the least changes in this indicator during storage among all children's kefirs studied in the work.

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