Evaluation of microbiological purity of raw and refined white cane sugar

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Abstract
An assessment of microbiological quality of raw and white cane sugar was conducted. The study material consisted of fourteen samples of raw cane sugar and fourteen samples of refined white cane sugar from the campaign 2008-09. In the investigated sugars the analysis concerned the total number of mesophilic aerobic bacteria, anaerobic bacteria, thermophilic bacteria, thermophilic anaerobic bacteria, thermophilic spore-forming bacteria, mucus-forming bacteria, Enterobacteriaceae bacteria, and the total number of yeasts and moulds.

Raw cane sugar samples were characterized by varying degrees of microbiological contamination. Among the examined microorganisms, the largest share was recorded for mesophilic bacteria and thermophilic bacteria. Assuring proper refining process and ewering sugar ashes require a control of the microbiological purity of the raw sugar. High degree of microbiological contamination of raw sugar may eliminate the possibility of using it for direct consumption. It was shown that white sugar obtained by refining various purity raw cane sugars meets the standards developed by the U.S. National Soft Drink Association.

Highlights
- Microbiological contamination of raw cane sugar may cause a risk for customers.
- Refined white cane sugars generally meet international microbiological standards.
- Control of microbiological purity of unrefined sugars needs proper standards.

Keywords
Raw cane sugar; White cane sugar; Sugar microbiological purity; Sugar refining.