

International Conference on

Food Chemistry & Hydrocolloids

August 11-12, 2016 Toronto, Canada

Innovation in technology for processing goat's milk and dairy products

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Mongolians have a tradition of producing a variety of products from cattle, horse, sheep, goats and mares milk. The number of Mongolian livestock has reached 56 million, while 23.5 million of them are goats and livestock per person is one cattle and horse, 7 goats, 8 sheep and 0.12 Camel. We are working on a research to determine the milk yield and the unique composition of Mongolian pasture goats milk, explore the relation between the hair color /white and black/ of goat, consumption characteristics and produce functional dairy products using goat's milk, such as goat's milk soft cheese. During our research and experiments, we are utilizing widely used standardized methods, guidelines, laboratory equipment, such as; ion-exchange chromatography and gas, liquid chromatography, mass absorption spectrophotometry, kjeldahl and soxhlet methods etc. Specific compositions of the protein amino acids components, carbohydrates, fat, minerals, enzymes and immune substances of Mongolian pasture goats are showing that it is a good quality product for food, child nutrition, treatment and spa food. It is also related to the Mongolian traditions of replacing breast-milk with goat's milk and also uses it for a variety of health treatments. It has been proven that biotransformation of cheese, which has a part of propionic acid bacteria (*P. shermanii*), contains large quantities of volatile acids, soluble proteins, flavor forming compounds and plays a great role in producing the specific taste and quality of the product. Research findings revealed that goat's milk functional properties depended on the hair color of goats because fat acids in the milk were different in samples from goats with different hair color. The milk sampled from white haired goats was found to have a higher amount of unsaturated fatty acids than that found in the milk from black haired goats. Since Mongolia has a rich source of non-cow's milk, especially the rich source of goat's milk, it is really important to build advanced technology, modern research methods and inventing new special milk composition. As well as, producing brand products, processing new technology, increasing the income of the herders and finding a new process for exporting the product.

Biography

Choijsilsuren Narangerel received her PhD in Technology on Soft Cheese from goat's milk (Food Science) from the Russian East-Siberia State Technological University, Ulan-Ude, in the year 2003. Currently, she is working as Director of Research and Innovation at the Institute of Technology (IT) in Ulaanbaatar, Mongolia. Her researching activities include Mongolian pasture livestock milk features such as goat and mare's milk quality characteristics, goat's milk soft cheese producing technology using propionic acid bacteria, preparation of probiotic micro-organism that are used for the production of fermented dairy products. She has published more than 60 research articles in both national and international reputed journals and is also serving as an Editorial Board Member of reputed Mongolian journal "Human and Food". In addition, she attended the presentations at international scientific conferences in Russia, South Korea, Greece and China. Also, her research work "Starter culture of Tarag with a natural symbiotic" was selected one of the best Mongolian scientific works in 2013.

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