

Analysis of Commercial Cow and Camel Milk by Nuclear Magnetic Resonance

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Abstract : Camel milk is widely consumed by people living in arid areas of the world, where it is also known for its potential therapeutic and medical properties. Indeed it has been used as a treatment for several diseases such as tuberculosis, dropsy, asthma, jaundice and leishmaniasis in India, Sudan and some parts of Russia. A wealth of references is available in literature for the composition of milk from different dairy animals such as cows, goats and sheep. Camel milk instead has not been extensively studied, despite its nutritional value. In this study commercial cow and camel milk samples, bought from the local market, were analyzed by 1D ¹H-NMR and multivariate statistics in order to identify the different composition of the low-molecular-weight compounds in the milk mixtures. The samples were analyzed in their native conditions without any pre-treatment. Our preliminary study shows that the two different types of milk samples differ in the content of metabolites such as orotate, fats and more.

Keywords : camel, cow, milk, Nuclear Magnetic Resonance (NMR)

Conference Title : ICCBES 2015 : International Conference on Chemical, Biological and Environmental Sciences

Conference Location : Venice, Italy

Conference Dates : April 13-14, 2015