Magnetic resonance imaging method of rapid remote control of casein concentration in milk products in unopened packages

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ABSTRACT

We propose a new nuclear magnetic resonance (NMR) method of rapid remote determination of casein concentration in dairy products in unopened packages. The method was successfully tested for whole milk products in unopened packages. The milk products had a fat concentration in a range of 0–6 %, casein concentration in a range of 0–3 % and were produced by different manufacturers of Leningrad Region, Russia. Because of the milk packages had different sizes and shapes we used a new receiver MRI solenoid which has a variable radius and shape for an improvement of signal to noise ratio of MR images of milk products measured in MR imaging system, GEMS Vectra, 0.5 T [1].

The entire lecture can be downloaded at this address:

www.chemie.uni-erlangen.de/oc/bauer/c11abs/c11_khripov_lecture_full.doc