Evaluation of physicochemical parameters of ultra-pasteurized whole milk in Uberaba

Flávia Correia Pereira*, Giovane Tonelli*, Leonardo Magalhães de Castro*, Sueli Ciabotti**

* Students of the Professional Masters Programme in Food Science and Technology – Federal Institute of Triângulo Mineiro-Uberaba. ** Professor at the Federal Institute of Triângulo Mineiro-Uberaba. Av. Edilson Lamartine Mendes 300, 38.045-000, Uberaba, Minas Gerais, Brazil

This study aims at evaluating the physicochemical quality of ultra-pasteurized whole milk (UHT) sold in Uberaba. 21 samples were collected from seven different trademarks in different manufacturing dates being analyzed for physicochemical characteristics. The analysis followed the Official Analytical Methods of MAP (IN No. 68/2006). In the analysis for fat, despite no statistical difference (p> 0.05) between treatments, the F brand showed non compliance with the legislation with 2.9% fat, a level characterized for semi skimmed or partly skimmed milk, what is against the minimum content of 3.0% proposed for whole milk. The acidity index between 0.15 to 0.16 g ac.lactic/100ml for all samples is in accordance with Ordinance N°370/97 of MAPA, which suggests values between 0.14 to 0.18 g ac.lactic/100ml. The Legislation for UHT milk does not determine the standard for density, but it is known that regular milk weighs 1.028 to 1.033. The samples analyzed were found in accordance with those parameters meaning that the quality control of the sterilization process was effective. Total solids (ESD) include all components of milk, but fat. The samples presented 8.45 to 8.74 being in accordance with legislation (minimum of 8.2). The UHT milk law allows the addition of stabilizers which tend to increase the cryoscopy rate where all samples were within the parameters. With the exception of a sample in the fat variable, all were within the standards of the relevant laws.