SUCCESSIVE ACTION OF HEAT TREATMENT ON THE MILK QUALITY


Milk is a staple in the human diet. It is considered one of the most complete foods, given its composition rich in proteins, fats, carbohydrates, minerals, essential amino acids and vitamins. Being a product quite perishable and easy to decay, it is necessary to subject it to heat treatment to increase shelf life and make it safe for consumption. This study evaluated the effect of successive heat treatments on the centesimal and lipid composition of milk. Samples of fresh milk were successively subjected to heat treatment of pasteurization and commercial sterilization (Ultra High Temperature). Then, the samples of raw milk, pasteurized and UHT (Ultra High Temperature), belonging to the same batch collection, were analyzed. From the results, we observed a significant difference (P <0.05) between fresh milk and UHT milk, demonstrating the influence of the successive action of heat treatment in reducing the fat content (from 3.65% to 3.07%), protein (from 3.14% to 2.93% a) and lactose (4.61% to 4.31%). The fatty acids had an effect similar to the action of heat treatments. A decrease in total concentration, in mg.g⁻¹ lipids, saturated fatty acids (from 589.08 to 457.08), monounsaturated (from 283.63 to 219.91), polyunsaturated (from 33.77 to 26.16), omega-3 (from 4.60 to 3.65) and omega-6 (from 9.07 to 7.32) for fresh milk and UHT milk, respectively. It is thus evident that the successive heat treatments influence on milk quality.