COMPARATIVE STUDY OF ULTRASONIC MILK ANALYZER AND TRADITIONAL METHOD FOR MILK ADULTERATED BY CHEESE WHEY


The ultrasonic milk analyzer has important feature by easy handling, speed, low cost compared to other analytical equipment. The present study was to compare the physico-chemical parameters determined between ultrasonic Lactoscan Milk Analyser Milkotronic ® and the official method of samples of raw milk and UHT (Ultra High Temperature) added cheese whey in the following proportions 5, 10, 15 and 20% (w / w). The analytical parameters used for the comparison were fat (F), density (D), nonfat dry matter (NFM), protein (P), ash (A), lactose (L) and cryoscopic index (CI). Nine replicates were made for each milk analyzer parameter and the official method was performed in triplicate. This assay was performed in two repetitions. The study showed that raw milk in the equipment has not shown good stability to evaluate physical chemical parameter for samples added by cheese whey, because in control samples showed a statistical difference in at least four parameters between the ultrasonic milk analyser and the traditional method (p <0.05). The evaluating of equipment performance in samples of UHT milk demonstrated that the ultrasonic milk analyzer has detected addition of whey cheese at all concentrations. This study showed that heterogeneous samples not provide a good analytical performance of the equipment as was observed for raw milk. The results obtained by ultrasonic milk analyser for homogenized samples had lower variation than traditional methods.