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DETERMINATION OF SULFITES AND PROTEIN CONTENTS IN SOME DAIRY PRODUCTS TO ASSESS THEIR RISK ON EGYPTIAN CONSUMERS

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ABSTRACT

This study was concerned to determine the sulfites compounds because they represent a hazard to the Egyptian consumer, especially since they are not allowed to be used in most dairy products and no official method to determine the sulfite in dairy products until now. Thirty samples of each of yoghurt, soft cheese, Ras cheese, mozzarella cheese, and plain processed cheese were collected from the Cairo market. Sulfites and protein contents of these products were determined using rapid methods. These rapid methods were firstly evaluated and validated using cow milk and the LOD (Limit Of Detection) was 1.14 ppm and LOQ (Limit Of Quantification) was 3.06 ppm. Results of products analysis showed that plain yoghurt samples were sulfite free on the contrary the sulfite was detected in cheese samples. 83.3% of the samples of soft cheese (Feta, Baramily and Isstanbuly), 73.3% of Rass cheese and 80 % of plain processed cheese, whereas 93.3% of the mozzarella cheese samples contained sulfites in different concentration. The protein content of the tested samples using two methods: the classical Kjeldahl method and the rapid BCG (Bromocresol Green) method. Data showed that a gross variation in the protein contents of all cheese were observed.

Thus, we need a risk assessment studies to protect the consumers from the hazard of these products. Regulatory actions must be continued and the consumers should be advised to be aware of dairy products with relatively high risk.

Key words: Cheese, Protein, rapid methods, Risk assessment Sulfites.