

Dairy Foods: Microbiology

W66 Microbiological quality of dairy protein supplements sold in Saudi Arabia markets.

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Whey proteins are becoming popular dietary supplements here in the US and around the world. However, these ingredients are typically not sterile. There is need to investigate the microbiological safety of these products. The objective of this study was to determine the microbiology quality of whey protein supplements sold in Saudi Arabia. Twenty different dairy protein supplements were purchased from local stores in Riyadh, the capital of Saudi Arabia. These products ranged from whey protein concentrate (5), whey protein isolate (4), whey protein hydrolyzed (2), whey protein concentrate lactose free (3), whey protein concentrate mineral free (2) and casein isolates (4). Samples were analyzed for several microbial quality attributes including aerobic total plate count (ATPC), psychrotrophs (PC), *Enterobacteriaceae*, total coliforms, and fecal coliforms. The presence of selected pathogens such as *Staphylococcus aureus* and *Salmonella* were investigated. Our results showed that the average bacterial population for ATPC, PC and *Enterobacteriaceae*, were 4.1, 2.1, and 1.2 log cfu/mL, respectively. Coliform groups were found in 29% of samples while 10% were fecal coliform positive as revealed by the MPN method. *S. aureus* was located in at least 25% of samples, with a mean count of 2.1 log cfu/mL. Our results confirmed that there is potential health risk with the consumption of dairy protein supplements sold in Saudi Arabia. There is a need to develop a monitoring system to check the microbiological quality of dairy protein supplements on market to assure them safe to use.