The incidence and implications of residues of detergents and sanitizers in dairy products

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I. Introduction

The milk and manufactured products processed in the dairy industry are particularly sensitive to the actions of microbiological contaminants. Consequently, hygiene programs incorporating detergents and sanitizers are applied routinely to cows and dairy equipment. The various applications of detergents and sanitizers along the milk production and processing chain are summarized in Figure 1.

There is a wide variety of dairy equipment in use, including milking machines and storage tanks on the farms, and transport tankers, storage tanks, and process-
Fig. 1. Applications of detergents and sanitizers along the milk production and processing chain.

ing equipment in dairy factories. The systems used to clean that equipment can be classified into those in which cleaning and sanitizing are performed by separate materials and those in which a combined detergent-sanitizer is used (Table I). In both types of systems the water rinse which should follow the detergent, sanitizer, or detergent-sanitizer will reduce the chance of contamination of the milk or product the next time the equipment is used.

Cow hygiene programs may be divided into two sections: post-milking and pre-milking (Table I). The post-milking sanitizing of the teats is used as an aid in