

EQUIPMENT SURFACES PREPARATION VS. FOOD STRUCTURE

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Abstract

Food structure belongs to the very complex and dissipative system. Mechanism of interaction and diffusion within that system, are determined by their chemical composition and also by physical structure of various constituents. This interaction is strongly affecting food engineering surfaces equipment. Their preparation regarding hygiene, quality, and safety food production vs. food structure changes during processing have been presented.

It has been stated that raw material, semi food product, and final products, creating the structure can be characterised by different responses against any surroundings either closed or open to the material mass flow. It has been noticed that the variable value of that reaction seen as the resistance forces to any contact visible or invisible surfaces, depends on the ways of possible interaction with that surfaces, and are related to the adhesive forces appearing during that contact. It can be said that between the food matrix structure, and surfaces to be in touch with them, there is a game played with different final effects. That game between both sides is continuously on the way "from farm to fork". On that ways there are many types of equipment surfaces being in touch with those materials. The final results of that game are creating the problems to cope with the removal of the remaining different soil on those surfaces, and to use adequate cleaning procedure to minimised food contamination. The effectiveness of that surface's equipment preparation depends on the kind of soil and its adhesive value forces attachments.

Preliminary results of the final value, of food structure formation and resulting adhesives forces indicate, that both depends on its space configuration and rheological behaviour, on contribution to viscosity, surface tension and stability influenced by many factors: interfaces processes, moisture content, biochemical, microbiological, enzymatic and water activities.

Key words: *Surface equipment, Food structure, Adhesive forces.*