

**Secretaria da Pós-Graduação em Ciência e
Tecnologia de Alimentos**

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MICROENCAPSULATION IN FOOD INDUSTRY

The first records of attempts to apply the microencapsulation appeared in the 1930s. Since then, this technology has been studied and applied in several industrial areas. Microencapsulation is a method in which substances in solid, liquid, and gaseous states are coated with an encapsulating agent /wall material, obtaining particles with microscopic dimensions. An important point in the production of a microparticles is choice of encapsulating material, generally a polymer (proteins and polysaccharides, for example) that must be selected according to their physicochemical properties, the intended application, and the formation method of the microparticles. In addition, wall materials must meet the following requirements: good film-forming properties, low hygroscopicity, low viscosity at high solids concentrations, mild taste and odor, easy reconstitution, and low cost. In practice, because the same compound does not encompass all these properties, mixtures are used. There are several methods used for the preparation of microparticles, which are subdivided into chemical (polymerization), physical (spray drying) and physicochemical (simple and complex coacervation). However, method choice depends on some factors, such as the properties of the core material, the production conditions, and the characteristics of the final product. Microencapsulation has wide applicability, being characterized as an effective and extremely important tool in the preservation and protection of various components, such as microorganisms, enzymes, vitamins, dyes, etc. Therefore, this seminar aims to present the principles of

microencapsulation as well as its potential applications in the food area. Therefore, this seminar aims to present the principles of microencapsulation as well as its potential applications in food industry.

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