NMR RELAXOMETRY APPLIED TO FOOD CHARACTERIZATION

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NMR relaxometry is a source to evaluate food samples because NMR offers a great variety of relaxation parameters; Tavares et al., have been applying proton-spin-lattice relaxation times as a methodology to characterize the molecular dynamics and homogeneity of foods and especially fruit seed starch. From this parameter we can obtain as much information as possible from food molecular dynamics, water content, oil proportion, polysaccharides and fibers organization. These components and their proportion are directly related to the food material molecular organization, which can interfere in the packing, storage and cooking. Different materials have been analyzed by the measurements of spin-lattice proton relaxation, T1H parameter and the results showed that they present a proper molecular organization, due to the intermolecular interaction forces and moisture.

Biography

Maria Ines Bruno Tavares completed her Undergraduate in Chemistry from Universidade Federal do Rio de Janeiro (1980); Master's in Chemistry from Universidade Federal do Rio de Janeiro (1986) and Doctor Degree in Polymer Science and Technology from Universidade Federal do Rio de Janeiro (1991) and part of the Doctor Degree was done in Durham University (1989-1990). She is a full Professor at Instituto de Macromoléculas Professora Eloisa Mano da Universidade Federal do Rio de Janeiro and Coordinator of structured nucleus from the nanotechnology. She is a Undergraduate Bachelor from IMA-UFRJ and actually coordinates the undergraduate nanotechnology bachelor students. she has more than 200 papers and experience in material and metallurgical engineering, focus on polymer nanostructured materials, NMR analytical method applied to polymer materials; especially in nanostructured materials, the use of NMR relaxometry to evaluate complex polymer materials as hybrid nanocomposites and food science.

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