

Textural, Rheological and Sensory Properties and Oxidative Stability of Nut Spreads- A Review.

ABSTRACT

Tree nuts are rich in macro and micronutrients, phytochemicals, tocopherols and phenolic compounds. The development of nut spreads would potentially increase the food uses of nuts and introduce consumers with a healthier, non-animal breakfast snack food. Nut spreads are spreadable products made from nuts that are ground into paste. Roasting and milling (particle size reduction) are two important stages for the production of nut spreads that affected the textural, rheological characteristic and overall quality of the nut spread. Textural, color, and flavor properties of nut spreads play a major role in consumer appeal, buying decisions and eventual consumption. Stability of nut spreads is influenced by its particle size. Proper combination of ingredients (nut paste, sweetener, vegetable oil and protein sources) is also required to ensure a stable nut spread product is produced. Most of the nut spreads behaved like a non-Newtonian pseudo-plastic fluid under yield stress which help the producers how to start pumping and stirring of the nut spreads. Similar to other high oil content products, nut spreads are susceptible to autoxidation. Their oxidation can be controlled by application of antioxidants, using processing techniques that minimize tocopherol and other natural antioxidant losses.

Keyword: Roasting; Milling; Stability; Colloid; Quality; Rancidity; Peanut butter; Rheology