

Tuesday, November 8, 2016 - 15:30 to 17:30
Poster Session: Other Applications - Food (C)

Influence of gamma radiation on sensory and rheological properties of two commercial salad dressings

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Salad dressings are oil-in-water emulsions and they have been investigated by several authors due to its importance in the choice of an adequate formulation, process conditions and quality control. Their composition may vary and imply in viscosity changes.

As an alternative treatment to minimize the effects of heat processing, and increase the shelf life of products the irradiation can be a potential solution allied to the fact that can be applied in the final product package. Food irradiation can be employed to reduce microbial load and to enhance product quality. In this way, it has been applied in different types of food.

The aim of this study was to verify the sensory evaluation and viscosity of salad dressings submitted to irradiation treatment at 3kGy and 5kGy.

Sensory evaluation were performed with untrained panelist (n = 52) and color, flavor, odor and an overall appearance parameters were assessed. The measurements were made using a nine-point hedonic scale. The rheological behavior of each sample was carried out after temperature equilibrium (25°C) was reached; using a Brookfield rheometer model LV-DVIII. Viscosity and rheological behavior were measured in triplicates.

Rheological studies covered the rheograms for each salad dressing in function of irradiation doses. The studied salad dressings presented shear-thinning behavior better explained by power law model. The irradiation treatment did not modify this behavior as well as their viscosities. Sensory evaluation showed no significant differences between irradiated and control samples ($p < 0.05$).