

Lupin and chickpea-based yogurts as dairy and soy alternatives

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Abstract (máx 300 words)

The consumption of plant based products as dairy alternatives has been increasing steeply, sustainability and ethical concerns are the major drivers for this diet transition but it can only be achieved if these products meet consumer's acceptance regarding taste and texture. This study compares lupin-based (LB) and chickpea-based (CB) yogurts, with two commercial yogurts from soy and cow milk. To each liter of pasteurized LB “milk” or CB “milk”, obtained from 10% (w/v) of dry whole seeds soaked and cook in water, one commercial soy yogurt was added for the starter cultures for the lactic fermentation. The incubation occurred at 50°C for 12 to 16 hours. Nutrition composition was quantified for lupin and chickpea and compared to the composition declared on labels of the soy and cow milk commercial yogurts. Viscosity of the four yogurts was measured with a controlled-stress rheometer (Haake MARS III, Germany), equipped with a cone-plate geometry in steady shear. Viscoelastic parameters were also determined in oscillatory measurements at low shear stress: first a shear stress sweep was performed to determine the linear viscoelastic range. For all rheological analysis, the temperature was kept at 8°C and at 20°C. Texture characterization was also performed using a TA-XT2 (Stable Micro Systems, UK) texturometer, in penetration mode, with a cylindrical probe of 2cm diameter at 20 mm penetration depth at 20°C. This work contributes to the knowledge of the rheological and textural properties of LB and CB yogurt alternatives to dairy and soy products. Preference tests were performed to evaluate consumer acceptability. These products will be targeting the vegan market, are plant based proteins source and lactose and gluten free.

Keywords

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