



## COMPARISON OF THE EFFECT OF HOMOGENIZATION AND SONICATION ON THE TEXTURE PROPERTIES OF GOAT MILK YOGURT

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### ABSTRACT

In our study, we investigated the effect of homogenization and ultrasound treatment on the goat milk yogurt.

After pasteurisation of the milk, the samples were homogenised at 100 and 200 bar and sonicated at 100 W for 5 and 15 minutes. Untreated milk was the control sample. Samples were inoculated with yoghurt culture, fermented at 45°C to pH 4.6 and stored at 5°C until testing. Texture properties were tested using a Brookfield CT3 Texture Analyzer and whey separation was tested by centrifugation.

The homogenisation improved the hardness of the product in both cases, but ultrasound treatment only gave a significant improvement during the 15 min treatment. The hardness of the control sample was 105.5 mN, hardness of the sonicated sample 116.75 mN. For the homogenized samples (100- and 200-bar), the values were 114.25 mN and 122.75 mN, respectively. The whey separation of the samples was significantly reduced in the homogenised and in the 15 min sonicated samples. The whey separation of the control sample was 58.9 % while that of the 15 min sonicated sample was 43.6 %, and that of the 100 and 200 bar homogenised samples was 41.3 % and 34.3 %, respectively.

*Keywords: homogenization, sonication, texture, goat milk*