

## Idea till production of functional synbiotic nougaz

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**Background and Aims:** Synbiotics are one of functional foods which contains probiotic microorganism and prebiotic.

Probiotics are often used in dairy production but their shelf life is limit and at shelf life end, live microorganisms decrease much. Many researches are done for using probiotics at not-fermented food such as confectionary products, for example Nougaz. Nougaz has many simple carbohydrates. So change it to low calorie-synbiotic-functional product can increase its advantage so much. Therefore idea of synbiotic Nougaz production with bacillus Coagulance and prebiotic-low Calorie sweeteners such as Isomalt & Sorbitol is created but some problems are, can this bacteria be live at high temperature usage at Nougaz production and after long shelf life of Nougaz at room temperature, are there minimum 106 cfu/g live bacteria.

**Methods:** Genus and species of Bacillus Coagulance were tested by PCR methods. Isomalt & Sorbitol were used single and mix at Nougaz production. Bacteria growth tested at MRS agar without glucose with only isomalt or sorbitol and with together. Probiotic bacteria stability was tested at Nougaz every 15 day until it became less than 106 cfu/g.

**Results:** Bacillus coagulance strain was confirmed. Usage of only isomalt caused crystallization in Nougaz and usage of only sorbitol caused very soft and unsuitable texture. Mix of them created very good texture. At MRS agar with only isomalt, only sorbitol, together, highest bacteria growth 109cfu/gis belonged to MRS agar with sorbitol and isomalt. At shelf life time at room temperature, stability probiotic bacteria tests showed live bacteria decreased from 106 cfu/g after 6 month after production data.

**Conclusions:** Results showed synbiotic Nougaz with isomalt and sorbitol named prebiotic and Bacillus coagulance named probiotic bacteria are best choose for having suitable texture and long shelf life about 6 month with 106 cfu/g of live probiotic bacteria.

**Keywords:** Probiotic; Symbiotic; Prebiotic