

Functional foods
Nutrition Dept- 2nd stage
EXPERIMENT (1)

Yogurt supplemented with Inulin

Yogurt is considered functional food; it is an important source of calcium, essential for the prevention of osteoporosis. The health benefits of yogurt were attributed to probiotics, and prebiotics by changing microflora composition in colon, so that beneficial bacteria to the body become prevalent. *B. bifidus* helps the gastrointestinal tract function better since it is part of the microflora. This reduces the chances of acute diarrhea and even helps fight *E. coli* infections. Role of the probiotics, mainly, the strains of *Lactobacillus* and *Bifidobacterium*, are used for prevention and treatment of gastrointestinal infections being increasingly investigated as a complement or an alternative to antibiotic use, with potential to reduce the use of antibiotics.

Inulin is a type of soluble fiber found in many plants. Inulin is also fructan. Like other fructans, it is a prebiotic, meaning that it feeds the good bacteria in the gut. Fructans are chains of fructose molecules. The molecules link together in a way that the small intestine cannot break down. Instead, they travel to the lower gut, where they feed beneficial gut bacteria.

The gut bacteria convert inulin and other prebiotics into short-chain fatty acids, which nourish colon cells and provide various other health benefits

Manufacturers add inulin to processed products to :

- boost the prebiotic content of foods
- replace fat in foods
- replace sugar in foods
- alter the texture of foods
- improve the health benefits of foods due to its benefits for gut health

Health benefits of inulin

- Improves digestive health
- Relieves constipation
- Promotes weight loss
- Helps control diabetes

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- Improved mineral absorption and bone health

Methodology:

Yogurt preparation:

- 1- In order to obtain yogurt whole milk was used, following specific technological process assortment. The milk was pasteurized at 95° C and held in the tank for 25 min, cooled to 43° C and inoculated with starter culture of yogurt.
- 2- Different percentages of inulin will be added.
- 3- Quality and sensory attributes will be assessed