PRACTICE ABSTRACT nº 51

Author: Margaret Masette, Samuel Edgar Tinyiro, Davis Akullo, Fred Wanda and Cassius Aruho – *NARO*

Untreated and germinated faba bean supplementation for the production of healthy cookies

Faba bean is a valuable legume rich in proteins, fibers, and bioactive compounds, but its anti-nutritional factors can affect its utilization in food products. Germination is known to enhance its nutritional quality and functional properties, making it a promising ingredient for bakery applications which is conducted for 72hours.

Three batches of Cookies (fig. 1) were formulated with untreated faba bean flour (UFBF), germinated faba bean flour (GFBF) and compared to a control (100% wheat flour) in addition to the different ingredients (vegetable fat (19%), milk powder (4%), egg (15%), sugar (12%), baking powder (0.5%), vanilla (0.5%) and salt (0.5%)).

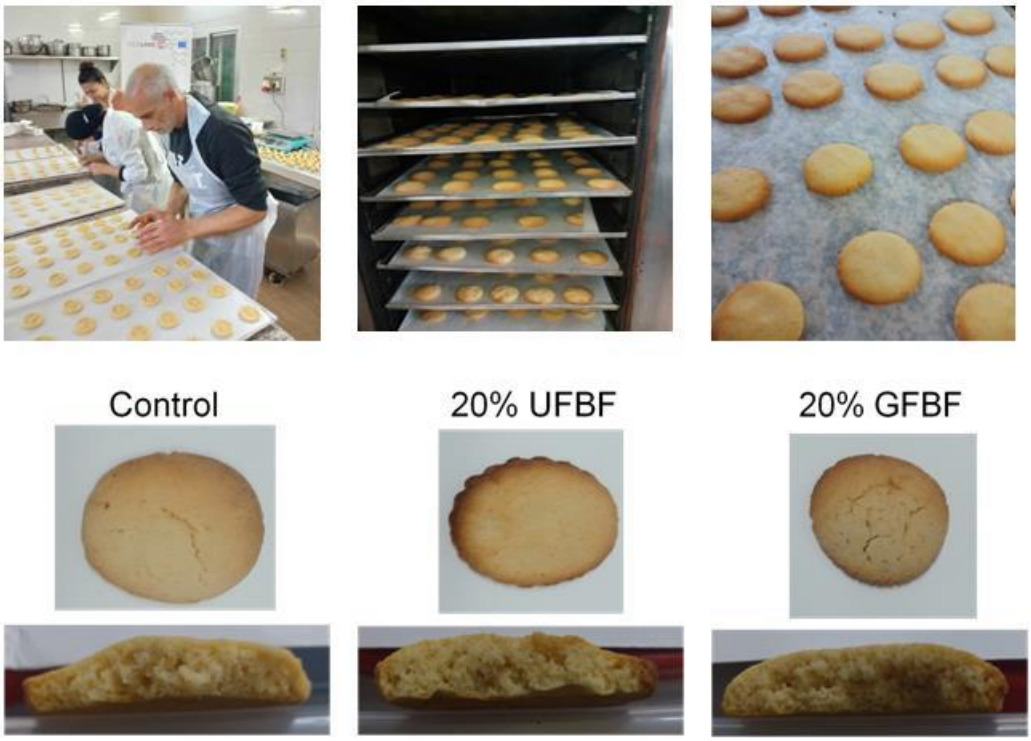

Figure 1: cookies preparation

Baking procedure

Cookies were baked at 165°C for 13 min.

Cookies Quality

The colour parameters (L*, a* and b*) showed significant difference between cookies samples, however the cookies supplemented with germinated faba bean have similar values to the control.

A higher spread ratio values were observed for the faba bean supplemented cookies.

The total phenol content and antioxidant activity were enhanced with faba bean supplementation.

The sensory evaluation showed significant differences in color, grainy texture, crunchy texture and overall appreciation. The highest scores was recorded for the cookies supplemented with untreated faba bean which was the most appreciated sample followed by germinated faba bean cookies.

These supplemented cookies offer a healthier alternative to conventional cookies, providing higher protein and antioxidant nutrients content, which can contribute to improved digestion and satiety. This study highlights the potential of germinated faba bean as a functional ingredient for developing nutritious and health-promoting bakery products.

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