

From'Innov : a new technology to obtain aroma in solubilized soft-cheese

HAREL-OGER M. (1), GARRIC G. (1), MARTIN C. (1), MARETTE S. (1)

1 INRAE, Rennes, France

The dairy platform of the STLO, Rennes, developed an innovative technology and more sustainable cheese making process (INRAE patent, From'Innov, WO2016108024). This technology consists of mixing a texture matrix obtained by ultrafiltration with one or more aromatic matrix. The latter is innovative: it allows obtaining a maximum of aroma in a short time, less than a few days. The principle is to grow each of microorganisms in an optimized middle with essential nutrients, optimal pH and temperature, and O₂ if necessary. After adjusting the pH and temperature of the mix, we proceed with the coagulation then the molding, and the next day the demolding. The cheese is ready and contains the expected aromas. It needs five days to obtaining a soft-cheese with surface flora such as *Penicillium* and/or *Geotrichum*.

We used this vector to define the consumer's level of acceptability in view of a breakthrough technology.

In this study, a commercial cheese (control product), representative of solubilized soft-cheeses, and two From'Innov cheeses (one close to control and the other more with more character) were studied. The acceptability and the main sensory properties of these three cheeses were evaluated by a panel of 142 consumers. The objective was to determine the hedonic appreciation of From'Innov cheeses, compared to that of commercial cheese, and to determine the sensory properties enhancing or penalizing the appreciation of different cheeses.

The results showed that the hedonic appreciation of From'Innov cheese with character, although lower than that of commercial cheese, is satisfactory (5.6/10), despite a ripening time four times shorter. In addition, the intensity of the fruity notes and the character of this From'Innov cheese were judged to be close to ideal, whereas these two characteristics were judged to be insufficiently intense in commercial cheese. Finally, despite a lower salt (-20%) and fat (10%) content, the intensity of saltiness and fat of From'Innov cheese with character was judged to be close to ideal, very close to that of commercial cheese.

The perspective of this study is to know whether our innovative technology will have a place in the current market and for which products, for whom?