Processing in Person: Keeping It Fresh (Part II)

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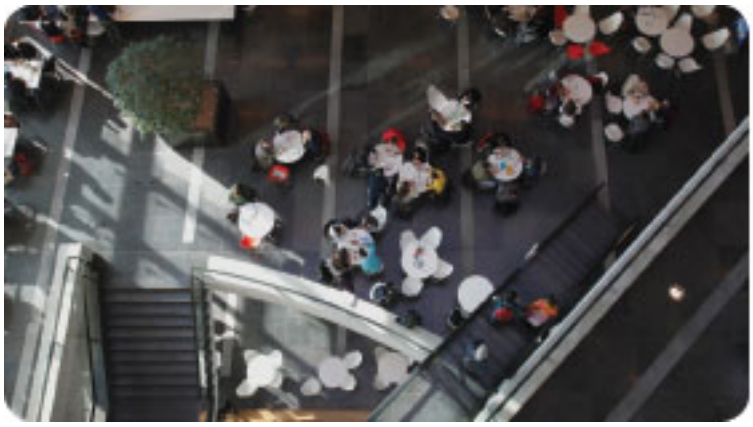
***Chem.Info*'s recurring Processing in Person feature highlights a processing company that stands above the rest for the implementation of strategic processing techniques and the production of high quality goods. This week, we're focusing on juice processor Hoogesteger in the Netherlands.**

Delivering Quality



In fresh juice production the FMP process delivers a series of electric pulses to a vessel filled with juice. As microorganism cells take in food through their pores, the cells use internal electric pulses to regulate the size of those pores. The introduction of external electrical pulses can confuse the cells and create holes in their outer membranes. This process ensures that these cells are subsequently unable to divide, replicate and cause decay. This is crucial to the effective application of PEF technology in juice processing, as yeast and other microorganism death is the primary cause of quick spoilage in fresh juices.

René van Vliet, Hoogesteger’s plant manager, says it should be made clear that PEF is not a food safety solution. Traditional heat pasteurization techniques serve a dual purpose: they extend shelf life and ensure food safety by killing off a slew of microorganisms. In the process they also change the nutritional composition and significantly impact the flavor of the juice.

In many ways, Hoogesteger was the perfect candidate for this technology. Because the company was already producing freshly squeezed juices without the added security of a heat pasteurization step, the food safety program at its facility was, by necessity, already robust enough to ensure pathogens did not make it into the company’s juices.

After significant testing of the FMP processes on its juice products, Hoogesteger found no deviation in nutrition, flavor, quality or even vitamin concentration. A series of consumer focus groups attested to the consistency in taste between the

traditionally produced and FMP-treated products. According to the company, the resultant product is “biochemically the same” as fresh juice.

And, in the end, Hoogesteger benefited from a shelf life that tripled to 21 days without the use of additional preservatives or pasteurization. This has allowed Hoogesteger to work on expanding its reach beyond Holland to the rest of the Europe.

Yesterday... Hoogesteger's commitment to fresh, quality juice *[1]*

Tomorrow... The future of PEF

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