



Fine-tune your homogenizer to boost quality of tomato products

HOMOGENIZATION, PREPARED FOOD

In a processing plant for tomato ketchup and other tomato sauces, the homogenizer is often treated like a workhorse. It can go on working faithfully year after year in the same way. What a customer may have forgotten after all these years is that a homogenizer can be fine-tuned to give a number of benefits, or to optimize the process.

“A homogenizer is a very reliable machine. It stands there in a corner and does its job week after week, year after year,” says Jenny Jonsson, Application Specialist at Tetra Pak Processing Systems in Sweden who has visited many customers that process tomatoes. “After a few years, a customer may lose track of what they can do with a homogenizer or become reluctant to change any parameters because their process is working well. But don’t be afraid to touch your homogenizer!”

Her advice to customers is to review the process from time to time, and to experiment by making adjustments to the homogenizer.

Small adjustments can give marked effects

An effective homogenization of tomato juice, ketchup, sauce and paste provides a wide range of positive effects that result in a better overall product quality. These include less separation/watering off, Improved mouthfeel and Improved colour.

“One thing you can very easily change is to increase or decrease the pressure and see what happens,” advises Jonsson. “Many tomato processors are very aware of their consumption of

electricity and cooling water. You could test if you can reduce the pressure and still have a satisfactory product quality. In that way, you can save money and wear on the parts, and make as small a footprint as possible.”

One of the trends driven by consumers is the desire for a tomato ketchup with a ‘clean label’ (one with as few artificial additives as possible). By increasing the pressure, it may be possible to remove stabilizers such as CMC (carboxymethyl cellulose) and still achieve the same product quality as before.

One final tip from Jonsson is that if the homogenizer is upstream of the heat exchangers, it may be worth moving it downstream to avoid turbulence and pumping. Excessive shear after homogenization can adversely affect the viscosity and mouthfeel of ketchup and tomato pastes.

To learn more about the efficient homogenization of tomato products:

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