

EDERNA Develop Intense Natural Flavors with Novel Concentration Process

30 Mar 2017 --- Unique on the food & beverage and biotechnology markets, a novel Engineered Osmosis process developed by EDERNA ensures high levels of concentration with full preservation of the sensory and functional properties while offering a low environmental footprint. Thermosensitive molecules are protected from degradation by the absence of heat. No vacuum means that aromatic volatile substances are retained.

Sensory profile comparison of flavor concentration methods evapEOs Engineered Osmosis is compared with current vacuum evaporation techniques in new study comparing flavor concentration methods.

Trials were carried out on the citrus fruit bergamot, well known for its unique intense aroma and flavor. The juice extracted from the fruit was concentrated from 12°Brix to 60°Brix comparing both processes: evapEOs at 20°C (70°F) and vacuum evaporation at 60°C (140°F). The samples were evaluated by a panel of tasters from a French independent, COFRAC certified, sensory analysis laboratory. The olfactory profile of the concentrate produced using evapEOs is very close to the initial bergamot juice, contrary to the result from thermal evaporation.

The process not only delivers a superior product, it also does so with reduction of expenditure on energy by 50%. Users are thus able to market higher quality products that cost less to produce than standard ones.

EDERNA, a membrane technology company based in Toulouse, France, has developed the evapEOs cold concentration process, the winner of the Best Innovative Process Award in the Global Food Industry Awards 2016. ederna offers to F&B industries and biotechnologies a full range of evapEOs systems under license, with worldwide technical and process development support.

