

# **100 MPa Supercritical Extraction: The Example of Carotenoid Extraction**

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In the last years, a trend to increase extraction pressure has been observed some supercritical extraction R&D works.

Separex developed a range of economical extraction systems, working up to 1,000 bar in standard operation. Carotenoids extraction is a typical example of the interest of working at high pressure.

This poster presents some extraction results on 2 different raw materials: dried tomato for the extraction of lycopene and Sea buckthorn that is rich in both carotenoid and unsaturated fatty acids.

Extraction at 300/600/900 bar are compared. In both applications extraction rate is very significantly increased showing the economic interest to work at this pressure for these applications.

Interestingly, measuring carotenoid concentrations in the extract also shows that increasing pressure may be an efficient way to produce more concentrated and valuable carotenoid extract.