

# Multi-Purpose Extraction Unit



*Spices & Herbs*

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PROZESSTECHNOLOGIE

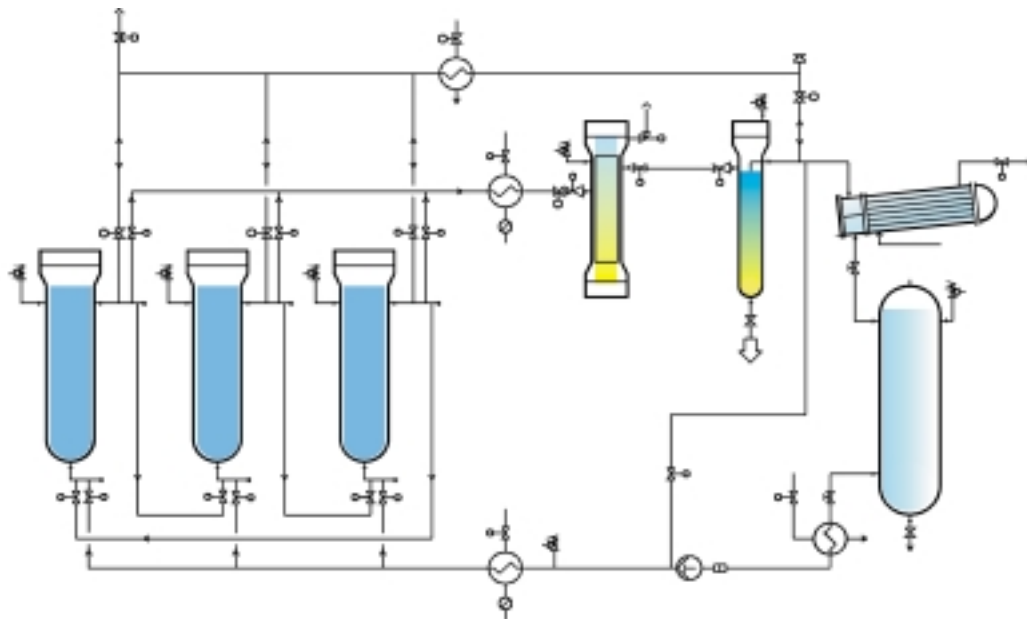
# Don't worry about solvent residues

## The Process

Supercritical Fluid Extraction (SFE) has several advantages compared to steam distillation and/or extraction with classical solvents (hexane, acetone, ethylacetate), which are the traditional spice extraction methods:

- No problem with toxic solvent residues in the products.
- Low process temperatures.
- Uniformity of flavor.
- Extracts free of bacteria, mould, fungus and other contaminations associated with the raw material.
- Low storage costs.
- Availability during the whole year.

Baskets with pretreated raw material are inserted into the extractors with payload volumes between 200 l to 800 l each. Supercritical CO<sub>2</sub> (up to 700 bar) dissolves the non and low polar substances, which are precipitated in a separation system consisting of at least 2 separators to allow fractionation. In the first one less soluble components like colors, pungent materials, viscous oils etc. are collected, while highly volatile substances and essential oils are obtained in the second one. Individual customer standards can be achieved by mixing the obtained fractions.



## Applications

Bulk quantities of the following products are already extracted in plants supplied by NATEX:

- Chili extract up to 20 % capsaicin
- Chili color up to 200.000 color units
- Pepper extract 40 % piperin / 20 or 10 % essential oil
- Ginger extract up to 26 % gingerols, 6-shogaol < 1,5 %
- Clove extract 70 % essential oil
- Rosemary extract up to 28 % carnosolic acid
- Vanilla extract up to 18 % vanillin
- Extracts are also available from hops, mace, nutmeg, coriander, cardamon, pimento, caraway, anis, calendula, camomile, marine sources etc.

For further information please contact:

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