SOLID/LIQUID EXTRACTION UNIT

Solid/Liquid Extraction Miniplant for Process Development

DESCRIPTION

To separate an active ingredient from solid raw material a solid/liquid extractor is used. Very often the raw material is an agricultural product from which flavor or agents should be extracted. According to the type of raw material the appropriate operating temperature and solvents are chosen and also the appropriate equipment type.

The Solid/Liquid-Extractor for development work and/or training purposes can be used in different ways:

- Continuous downward extraction
- Continuous overflow extraction
- SOXHLET-Extraction

For training purposes the different methods can be compared according to energy input and achievable concentration. An experiment manual is available.

EQUIPMENT DESCRIPTION

The heart of the unit is the 4 L extraction vessel, in which the raw material is held by a removable borosilicate glass basket. The extraction vessel is closed with a quick opening connection to enable easy replacement of the raw material.

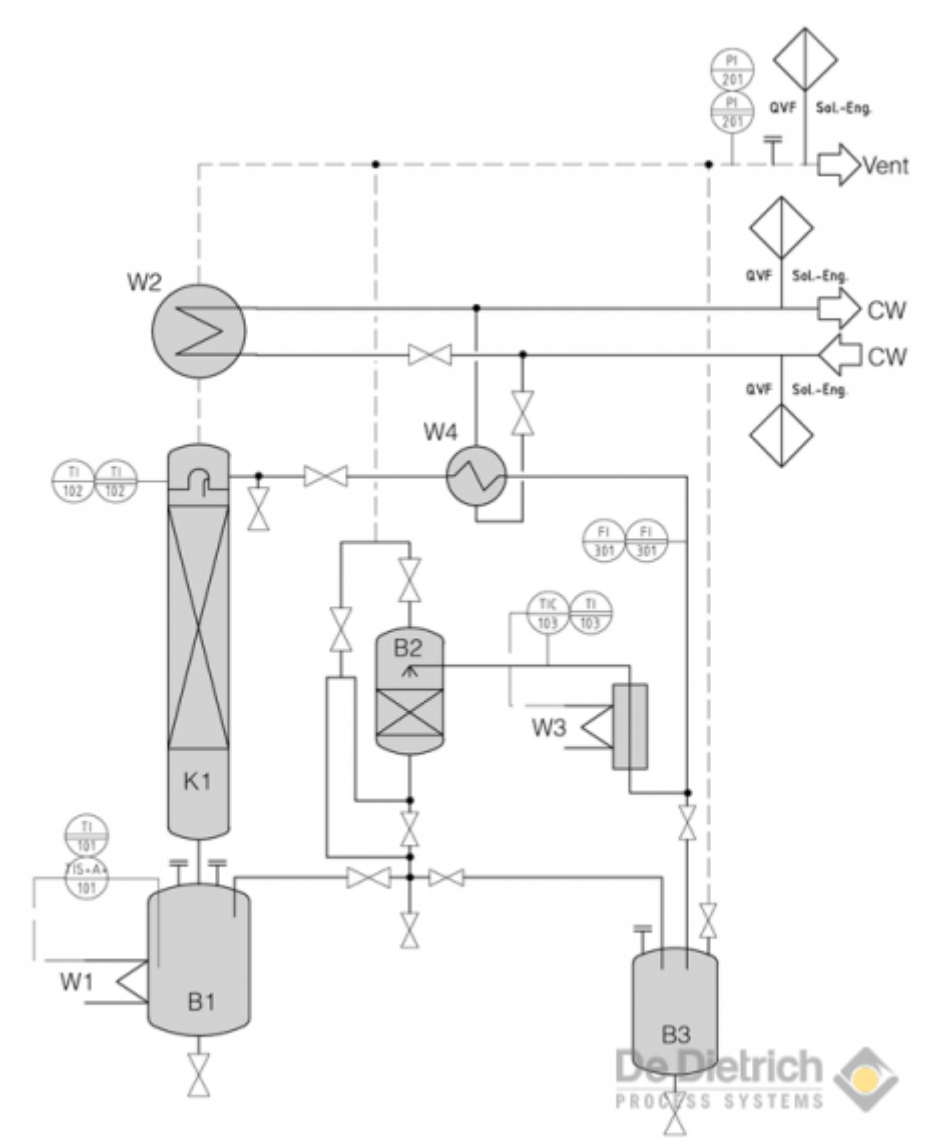
The piping gives you the ability to chose continuous downward extraction or continuous overflow extraction.

The loaded solvent can be treated according to the SOXHLET method, by distillation in the column beneath and condensation on top. Therefore the agents will be concentrated in the bottom of the column and the condensed and cooled solvent can re-enter the extraction vessel or can be sampled in the receiver. The distillation vessel is electrically heated. The solvent is preheated before feeding to the column.

TECHNICAL DATA:

- Extraction vessel DN 150, 4 Liters
- Distillation vessel 6 Liter spherical vessel, electrical heating
- Column DN 80, glass packing
- Receiver 6 Liter spherical vessel
- Condenser 0.3 m^2 coil heat exchanger
- Distillate cooler 0.03 m^2 coil heat exchanger
- Heating power 1700 W, 230V
- Pre-heater 300 W, 230 V
- Piping and Valves made from borosilicate glass or PTFE

- Stainless steel structure, Dimensions about 1000 x 600 x 3300 mm
- Instrumentation
- Control cabinet and process control system optional
- The plant is not equipped for ex-proof requirements



Flow Chart of a Miniplant for Solid/liquid Extraction

Which kind of industry can use this product?

Plant-based Ingredients

Questions? We are here to help.

If you'd like to talk with a sales representative about purchasing De Dietrich Process Systems's products and services, you can reach us here.

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