GPCE30

SIMPLE LIQUID-LIQUID EXTRACTION

Experimental capabilities

- **Identification of components of a liquid-liquid extraction plant**
- **Installation commissioning**
- **Study of liquid-liquid extraction**
- **Column efficiency**
- **Mass balance**

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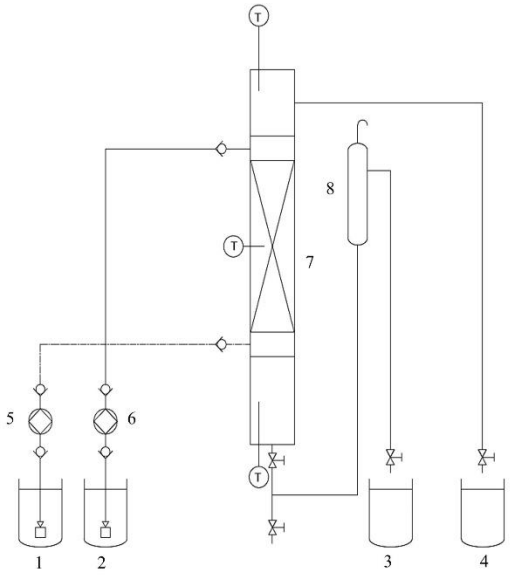
Operating principle

The GPC E30 bench allows the study of liquid-liquid extraction.
A pump ensures the supply of the mixture from the top of the column. A second pump feeds the solvent from the bottom of the column. The mixture and the solvent will therefore circulate against the current, which will allow the solvent to extract acetic acid from the water for example.

The robust design of this device makes it suitable for use in schools.
The equipment is set up on an Anodized aluminum frame on casters wheels. This gives it great strength and a flexibility of integration into your premises.
The manufacture of this equipment complies with the European standard for machinery manufacturing.

Illustrations



The trainer is installed on an aluminium profile structure equipped with four directional brake casters.
It has an electrical box with general power disconnector and 30mA differential circuit breaker.

1. Mixture input tank
- Materials: polyethylene
- Volume: 20 L

2. Solvent input tank
- Materials: polyethylene
- Volume: 20 L

Technical details

1. Raffinate recovery tank
- Materials: polyethylene
- Volume: 20 L
- a sampling valve upstream of the tank

2. Extract recovery tank
- Materials: polyethylene
- Volume: 20 L
- a sampling valve upstream of the tank

3. Peristaltic pump for feeding the mixture

4. Peristaltic pump for feeding the solvent

5. Extraction column
- Materials: borosilicate glass
- DN: 50 mm
- Length: 1000 mm
- packing: rashig rings

6. Level overflow
- Materials: borosilicate glass

Integrated instrumentation:
- 3 temperature probes type Pt 100
- Top of column
- Mid-column
- Bottom of column

Measurements are displayed on a 7" color touch screen

Services required

- Electrical supply: 230 Vac – 50 Hz – 16 A
- Electrical network: 1 phase + Neutral + Earth.
- Other volume: 20 L
- Dimensions: (LxlxH mm): 1500 x 800 x 1840
- Poids (Kg): 95

Note: if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

Documentation

- User's manual
- Technical documentation of the components
- Lab exercises
- Electrical diagram
- Hydraulic diagram
- Certificate of conformity CE

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