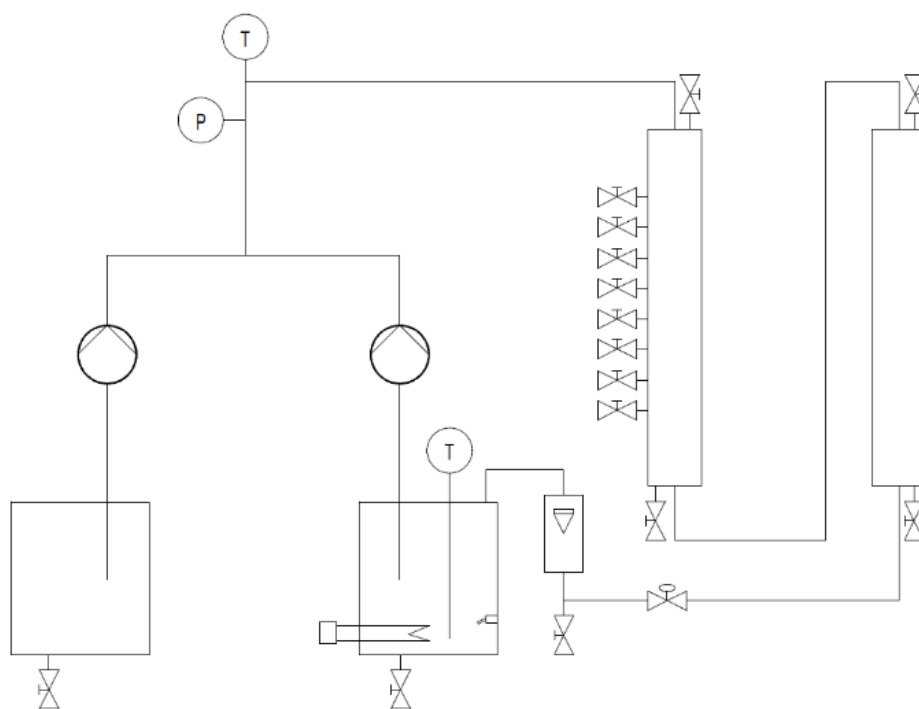


DEMONSTRATION OF ADSORPTION



Experimental capabilities

- Identification of components of an adsorption plant
- Installation commissioning
- Study of the operation of an adsorption bench
- Study of the adsorption of dissolved solids on activated carbon
- Study of the influence of temperature on adsorption
- Evaluation of the yield of an adsorber

Operating principle

The GPC A10 bench allows the study of the adsorption of methylene blue by activated carbon. Methylene blue is stored in a feed tank. A peristaltic pump injects the product into the first adsorption column. This contains activated carbon that will adsorb the methylene blue. A centrifugal pump ensures the loop circulation of pure water to regulate the concentration of the adsorbate.

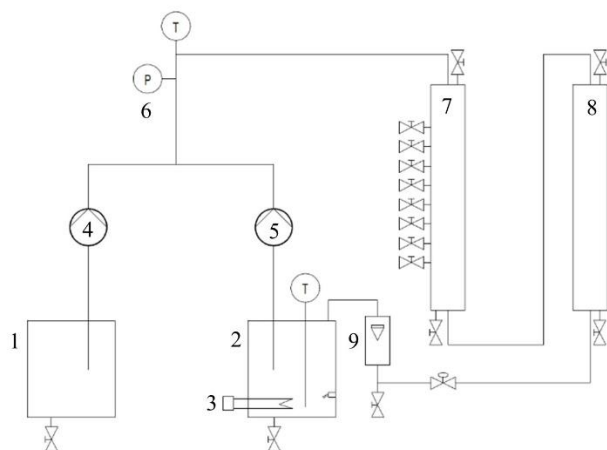
In order to remove any residues potentially present at the outlet, the product passes through a second column of activated carbon. Water that no longer contains methylene blue is reinjected into the tank of pure water.

The robust design of this device makes it suitable for use in schools.

The equipment is set up on an Anodized aluminium 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 bench is installed on an aluminum profile structure equipped with four directional brake casters. It has an electrical box with general power disconnecter and 30mA differential circuit breaker.

1. Product feed tank:

- Stainless steel tank
- Drain valve

2. Pure water supply tank

- Stainless steel tank
- Drain valve
- Immersion heater
- Low level sensor (safety immersion heater)

3. Immersion heater

- Maximum power: 1000W
- Safety thermostat
- On/off type temperature control

Technical details

4. Peristaltic feed pump produced

- flow rate adjustment (on the display)

5. Centrifugal pump for pure water supply

- Polypropylene body
- Flow manual control

6. Pressure gauge

7. Adsorption column

- Filling: activated carbon
- 8 sampling valves
- 1 drain valve
- Length: 600mm

8. Safety adsorption column

- Filling: activated carbon
- 1 drain valve
- Length: 600mm

9. Float flowmeter

- Scale: 5-50 L/h

Integrated instrumentation:

- 1 temperature probe in the pure water tank
- 1 temperature probe at the inlet of the adsorption column
- Pressure at the 1st adsorption column inlet
- Flow at the 2nd adsorption column outlet

Services required

- Electrical supply : 230 Vac – 50 Hz – 6 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Water supply : tank filling
- Dimensions: (LxWxH mm): 1400 x 800 x 1850
- weight (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
- Wiring diagram
- Hydraulic diagram
- Certificate of conformity CE