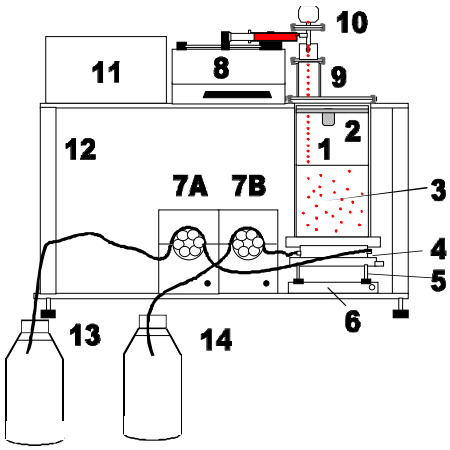
VAR B: SHORT PRODUCT DESCRIPTION

Overview



Short Description

This is an electromagnetically driven sterile single nozzle unit based on the laminar-jet-breakup.
The unit with its sophisticated multipurpose design and the flexible modular expandability has been tailored to the process developer's requirements. The modular approach in the design allows to change the unit repeatedly according to the changing requirements and to combine components delivered by us with equipment and devices already available in your laboratory. The number of standard options available is impressive.

Legend:

1	Autoclavable working vessel	8	Syringe pump
2	Bypass system	9	Sightglass with stroboscopic light
3	Hardening solution / level switches	10	Vibrator
4	Bottom with 2 injection ports	11	Control cabinet
5	Levelling device	12	Base frame made of stainless steel
6	Laboratory agitator	13	Flask for hardening solution, feed
7A	Peristaltic pump for feed	14	Flask for hardening solution, retract
7B	Peristaltic pump for retracting	Pos. 7, 13, 14 are not included in scope of supply	

Applications:

For a large number of applications (e.g. enzyme/drug immobilisation, cell encapsulation, cosmetic applications and many more), microencapsulation opens new technological possibilities.

Principle

The unit has a single vibrating nozzle (frequency and amplitude can be adjusted digitally). A syringe pump produces a steady pulsation-free flow through the vibrating nozzle. The generated drops can be observed by means of an LED-stroboscopic light as a stationary chain of drops. The stroboscopic light is automatically synchronised with the adjusted vibration frequency. Monodisperse beads of the size between 0.2 and 1.5mm can be generated. The deviations between the applications mainly depend on the viscosity and the surface tension the matrix. Roughly, you can estimate that the smallest achievable drop diameter is 1.5 to 2 times larger than the used nozzle diameter. The average productivity per nozzle is 400ml per hour, whereas this can significantly differ in function of the nozzle diameter and the jet speed. The unit can be sterilised in an autoclave. The system is designed for a typical size of 280ml.

Control Cabinet

- ☒ Rack with display, four lines x 16 characters, programmable micro controller for vibration control and stroboscopic light
- ☒ Power supply between 110 V and 240 Volt, automatically adjusting

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