

Sedimentation Study Unit





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DESCRIPTION

The sedimentation is a process widely used in the classification, water clarification and wastewater treatment.

"ESED" unit provides a facility for studying the basic physical processes involved in sedimentation, which the applications cover fields like chemical engineering, water treatment and other industrial processes.

This unit enables the practical demonstration of the particular features of the different systems selected for sedimentation.

It is formed by five sedimentation methacrylate cylinders mounted vertically on a panel, incorporating measuring scales appropriate lighted for easing observation.

All that, enables the simultaneous study of the behaviour of five different suspensions.

Each cylinder may be removed from the panel for the appropriate washing and conditioning.

The unit is supplied with: stopwatch, light diffuser screen, fluorescent tubes, cylinders and specific gravity bottle.

It enables to have available several amounts in suspension, in order to study the differences in the sedimentation regimens, measuring the changes in heights of the solid-liquid interfaces respect to time.













Bench-top unit.

Anodized aluminium structure and panels in painted steel (epoxy paint).

Five sedimentation graduated cylinders of methacrylate (1m. x 50 mm. approx.) mounted vertically on a panel, illuminated from behind, and with the possibility of being removable for cleaning.

Light diffuser screen and two fluorescent lamps.

Stopwatch.

Three beakers of 2 litre capacity.

Specific gravity bottle.

Cables and Accessories, for normal operation.

Manuals:

This unit is supplied with the following manuals: Required Services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices Manuals.

EXERCISES AND PRACTICAL POSSIBILITIES

Some Practical Possibilities of the Unit:

- 1.- Variation of the sedimentation characteristics with the concentration and suspension height.
- 2.- Effect of initial concentration on sedimentation characteristics.
- 3.- Effect of initial suspension height on sedimentation characteristics.
- 4.- Construction of settling rate curves against concentration form a single batch test.
- 5.- Effect of particle size distribution.
- 6.- Identification of the different sedimentation regimes.

- 7.- Use of flocculating additives.
- 8.- Construction of settling rate curves.
- 9.- Visualization of the retarded sedimentation.
- 10.- Study of the differences between a clarifier and a classifier.
- 11.- Study and visualization of the differential sedimentation.
- 12.- Study of the methods of sinking and floating.

REQUIRED SERVICES

-Electricity power supply: single-phase, 220V/50 Hz or 110V/60 Hz.

DIMENSIONS & WEIGHT

- Dimensions: 550 x 400 x 1300 mm. approx.

- Weight: 35 Kg. approx.

RECOMMENDED ACCESSORIES

- The use of a triple beam top loading balance is recommended.

* Specifications subject to change without previous notice, due to the convenience of improvements of the product.



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