

# CE 115

## Fundamentals of sedimentation



### Description

#### ■ separation of suspensions by sedimentation

Sedimentation is often used to clarify suspensions. In the process, the solid particles move downwards in a liquid owing to their density.

Using CE 115, the sedimentation processes in different suspensions can be investigated and compared. Five transparent cylindrical tanks are provided for the purpose. The suspensions are prepared in measuring cups, poured into the removable tanks, and mixed by shaking. The tanks are then mounted vertically on the experimental unit. To aid observation of the sedimentation process, the tanks are backlit.

### Learning objectives/experiments

- determination and comparison of the settling velocities of solids in suspensions dependent on the solid density and concentration and the liquid density and viscosity
- influence of coagulants on the settling velocity

### Specification

- [1] experiments in the fundamentals of sedimentation
- [2] 5 transparent tanks with scale for comparison of the settling velocities of solids in various suspensions
- [3] tanks removable for filling, mixing and cleaning
- [4] tanks backlit by fluorescent tubes to aid observation
- [5] 3 measuring cups for preparation of suspensions
- [6] pycnometer to determine the density of the liquids and solids
- [7] stopwatch to record the sedimentation time
- [8] recommended accessories: balance, coagulant

### Technical data

#### Tanks

- length: 1000mm
- inside diameter: 42mm
- scale division: 1mm
- material: PMMA

#### Fluorescent tubes

- power: 6x 18W

#### Measuring cups

- capacity: 2000ml
- scale division: 50ml

#### Stopwatch

- resolution: 1/100sec

230V, 50Hz, 1 phase

230V, 60Hz, 1 phase

120V, 60Hz, 1 phase

UL/CSA optional

LxWxH: 750x460x1160mm

Weight: approx. 53kg

### Required for operation

Coagulant (recommendation)

### Scope of delivery

- 1 experimental unit
- 3 measuring cups
- 1 stopwatch
- 1 pycnometer
- 1 set of instructional material