

**FILTERABILITY INDEX UNIT**

Model Number : GOTT-FIU-019

**DESCRIPTION**

The GOTT-FIU-019 enables a water quality test to be made on a suspension to be filtered through sand or similar granular media. It can therefore be used in routine control at waterworks, or at a sewage treatment works that employs tertiary filtration.

**FEATURES**

The use of deep beds of porous granular media to filter liquids to improve their clarity is widespread in municipal and industrial practice. Examples are: the filtration of drinking water, industrial water and the filtration of sewage as a tertiary stage.

Other liquids are filtered through granular media in the processing of beverages and food products for example. A simple measure of whether the liquid is filterable is useful to enable assessment of filtration as an appropriate process, if so what type of pre-treatment and filter media are required.

The Filterability Index Unit utilizes a bed of granular material, normally sand, which can be chosen by the investigator to suit his own purposes. The measurements taken with this apparatus enable a filterability number to be calculated which has significance in deep bed filter performance.

A particular application of the Filterability Index Unit is in the process control of existing deep bed filter operation. The effects of changing pre-treatment dosing (for example poly-electrolyte dose) can be rapidly tested before making changes on the operating plant.

This unit can also be used to determine the changes in filterability of a flocculating suspension subject to different degrees of prior flocculation and to measure the improvement in tertiary sewage filtration when poly- electrolytes are added to fine suspensions from humus tanks. In conjunction with the well-known waterworks jar test, the settling characteristics and the filterability characteristics of flocs can be assessed.

The equipment comprises a filter unit which contains a small plug of sand about 40mm thick, through which the suspension flows downwards from a funnel containing the 1 liter sample under test.

Head loss is measured directly by a water manometer. The filter unit can be readily demounted to change the sand. This unit and all tubing connections are transparent so that the operation can be observed and air bubbles avoided. Metal fittings are corrosion resistant.

**TECHNICAL DETAIL**

- Test filter cell diameter : 38mm
- Height of filter : 60mm maximum
- Variable area meter range : 20-280m/min
- Water manometer length : 0.5m

**ACCESSORIES:**

- 1 litre beaker (to collect filtrate)
- Thermometer
- Stop clock

**EXPERIMENT TOPICS:**

- Basic principles of filter operation for student study
- Preliminary assessment of pre-treatment processes and filter media
- Calculation of filterability index number from measurements taken

**REQUIREMENT:**

- Laboratory drain or 1 litre receiving vessel

**OVERALL DIMENSION**

- Height : 0.97m
- Width : 0.45m
- Depth : 0.25m

**Manuals :**

- (1) All manuals are written in English
- (2) Model Answer
- (3) Teaching Manuals

**General Terms :**

- (1) Accessories will be provided where applicable.
- (2) Manual & Training will be provided where applicable.
- (3) Design & specifications are subject to change without notice.
- (4) We reserve the right to discontinue the manufacturing of any product.

**Warranty :**

2 years

**ORDERING INFORMATION :**

ITEM	MODEL NUMBER	CODE
FILTERABILITY INDEX	GOTT-FIU-019	843-019

\* Proposed design only, subject to changes without any notice