# Whatman 934-AH™ Glass Microfiber filters

Whatman 934-AH Glass Microfiber filters (Fig 1) are suitable for suspended solids analysis. These filters also permit rapid passage of very large sample volumes without blockage for the collection of suspended solids in potable, natural, and industrial waters. Specified in standard methods* for determining total suspended solids in water, Whatman 934-AH Glass Microfiber Filters are excellent for the removal of turbidity and filtration of bacterial cultures. The fine particle retention of this popular grade is superior to any cellulose filter of similar rating and is capable of high retention efficiency at high flow rates.

## Features and benefits

- **Excellent fine particle retention:** allows for high particle retention efficiency when filtering large volumes.
- **Binder-free, high-grade borosilicate glass microfiber:** enables use with temperatures up to 550ºC.
- **Available in a wide range of sizes:** in circle and sheet formats.
- **High loading capacity:** capable of processing very turbid streams.
- **Low fiber shedding:** improves quality assurance of test results.

## Applications

- Water pollution monitoring
- Air pollution monitoring
- Cell harvesting
- Liquid scintillation counting

*The most widely used filter for establishing water quality in suspended solids content and related measure (Standard Method 2540D and EPA Method 160.2). Total suspended (non-filterable) solids are defined as those which are retained by a standard glass microfiber filter without organic binder.

A)


B)


**Fig 1.** Whatman 934-AH Glass Microfiber filters (A) and (B) are designed for the analysis of suspended solids.

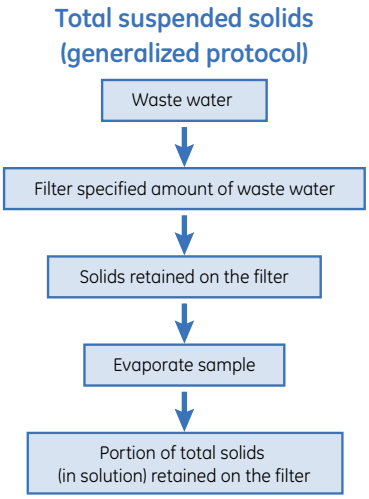


**Fig 2.** A generalized protocol for the analysis of suspended solids with Whatman 934-AH Glass Microfiber filters.

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## 934-AH generalized product protocol

Filter a measured quantity of water (usually 100 ml) through a circle of 934-AH that has been previously washed, dried, and weighed (Fig 2).

### 1. Determination of suspended solids

After filtering, wash solids retained on the 934-AH circle with distilled water and dry at specified temperature (e.g., 103°C–105°C) for a specified time (30 min to one h).

### 2. Determination of total dissolved solids

Total dissolved solids (filterable residue) is that part which passes through a standard glass microfiber filter. The filtrate is collected, evaporated, and dried to a constant weight at a specified temperature and time (drying temperature influences results because weight losses due to volatilization or decomposition and gains due to oxidation all depend on temperature and period of heating).

### 3. Determination of total solids

Total solids is sum of (1) nonfilterable and (2) filterable solids.

### 4. Determination of total volatile solids

Total volatile solids is a measure of how much organic matter is present in effluent and an indication of bacterial levels. Measurement can be taken immediately after the total suspended solids determination. Residue on the 934-AH is ignited in a muffle furnace at 550°C. The loss in weight on ignition is measured in mg/l and indicates total volatile solids.

## Typical data

| | |
|---|---|
| **Weight (g/m²)** | 64 |
| **Thickness (µm)** | 435 |
| **Particle retention (µm)** | 1.5 |
| **Filtration speed (Sec/100 ml)*** | 47 |
| **DOP penetration (0.3 µm particle)** | 0.02% |
| **Surface** | Smooth |

* Herzberg test at 10 cm hydrostatic head


## Ordering information

| Catalog number | Quantity (mm) |
|---|---|
| 1827-021 | 21 |
| 1827-024 | 24 |
| 1827-025 | 25 |
| 1827-028 | 28 |
| 1827-030 | 30 |
| 1827-032 | 32 |
| 1827-035 | 35 |
| 1827-037 | 37 |
| 1827-042 | 42.5 |
| 1827-047 | 47 |
| 1827-055 | 55 |
| 1827-070 | 70 |
| 1827-090 | 90 |
| 1827-105 | 105 |
| 1827-110 | 110 |
| 1827-125 | 125 |
| 1827-150 | 150 |
| 1827-185 | 185 |
| 1827-240 | 240 |
| 1827-320 | 320 |

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imagination at work



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