



Life Sciences

Acrodisc® MS Syringe Filters



Certified Syringe Filters for LCMS

- ▶ **LCMS (Liquid Chromatography Mass Spectrometry) certified** – Minimize interference in your LCMS results with the Acrodisc MS syringe filter. The first LCMS certified filter with extremely low levels of extractables.
- ▶ **Low ion suppression/enhancement** – Reduce the need for retesting. The Acrodisc MS syringe filters will not contribute extractables that will interfere with the ionization process, which is the heart of the LCMS technique.
- ▶ **Protective packaging design** – Save money and prevent downtime due to accidental contamination. Acrodisc MS syringe filters are packaged into separate tubes to protect them from external sources of extractables. While one tube is in use, the others are kept sealed.
- ▶ **Excellent chemical resistance** – Use this universal filter for all your LCMS samples. The WWPTFE (water wettable polytetrafluoroethylene) membrane can be used with both organic and aqueous solvents. When coupled with a polyethylene housing, the membrane offers excellent chemical resistance.
- ▶ **Low protein binding** – Get accurate and confident quantitative results. There is minimal protein adsorption with the Acrodisc MS syringe filters.
- ▶ **Particulate retention** – Using Acrodisc MS syringe filters will protect your columns and instrument from particulate build-up, making your columns last longer and your LCMS perform more consistently.

Filtration. Separation. Solution.SM

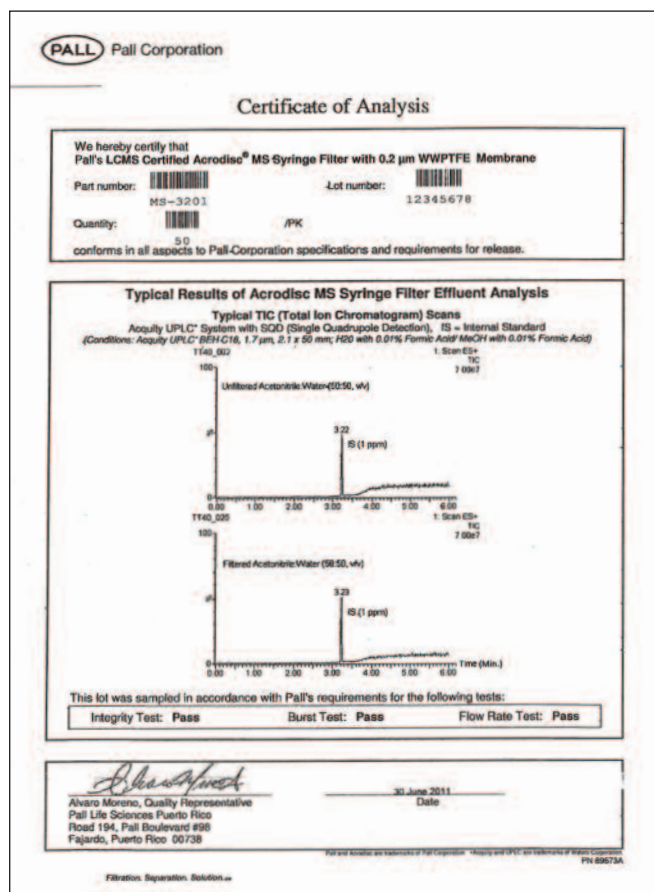
Applications

The Acrodisc MS syringe filter has been developed specifically for LCMS sample prep applications, such as:

- ▶ Molecular identification
- ▶ Structural determination
- ▶ Pharmacokinetics
- ▶ Drug discovery and development
- ▶ Drug testing
- ▶ Environmental monitoring
- ▶ Food safety monitoring
- ▶ Oil composition determination

Certification

To ensure low levels of extractables, Pall certifies that all lots of WWPTFE membrane used in the Acrodisc MS syringe filters have been tested according to established LCMS techniques. Each box of product comes with a certificate containing Total Ion Current (TIC) chromatograms that show all detected peaks relative to an Internal Standard. Results for integrity, burst, and flow rate tests are also included on the certificate.



Low Ion Suppression/Enhancement

Undesirable extractables can interfere with the ionization of target analytes and lead to either ion enhancement or ion suppression. In the case of ion enhancement, a higher signal is detected and may lead to false-positive results. With ion suppression, extractables inhibit the ionization of target analytes and cause reduced MS detection efficiency. Both of these phenomena affect qualitative and quantitative analyses. The Acrodisc MS syringe filter minimizes the risk of ion suppression/enhancement resulting in more reliable and accurate results.

Packaging

The Acrodisc MS syringe filters are packaged in special low extractable tubes that contain 10 filters each. The tubes do not contribute extractables and also prevent contamination of the filters from external sources. Each tube is sealed with a cap to protect the filters until they are ready for use.



Specifications

Materials of Construction

Filter Media: WWPTFE (water-wettable polytetrafluoroethylene) membrane
Housing: HDPE (high density polyethylene)

Pore size

0.2 µm

Effective Filtration Area

13 mm: 1.0 cm²

25 mm: 3.9 cm²

Typical Sample Volume

13 mm: ≤ 10 mL

25 mm: < 150 mL

Inlet/Outlet Connections

13 mm: Female threaded luer inlet, minispike outlet

25 mm: Female threaded luer inlet, male slip luer outlet

Maximum Operating Pressure/Temperature

13 mm: 75 psi at ambient temperature (21-24 °C, 70-75 °F),
30 psi at 55 °C (131 °F)

25 mm: 60 psi at ambient temperature (21-24 °C, 70-75 °F),
30 psi at 55 °C (131 °F)

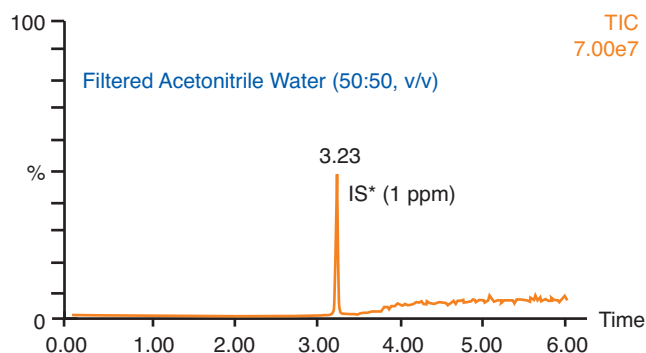
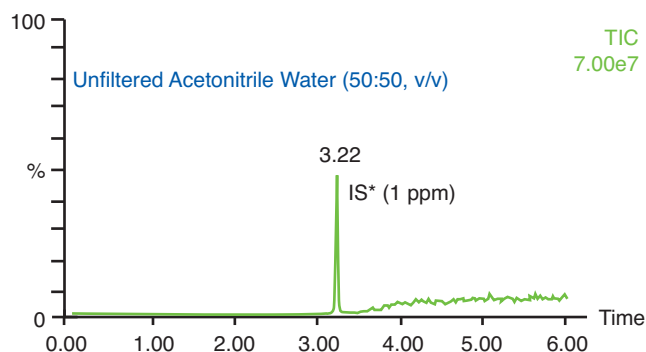
Typical Water Flow Rate

13 mm: 49 mL/min at 30 psi at ambient temperature

25 mm: 140 mL/min at 30 psi at ambient temperature

Performance

The following TIC chromatograms demonstrate full scans of unfiltered and filtered solutions of 50:50, v/v, acetonitrile:water over a six minute gradient UHPLC method.



Detection – Mass Spec: ES+ Mode; Mass Range: 100.00-1400.0

Column: Waters Acquity⁺ UPLC BEH 1.7 μ m – 2.1 x 50 mm

Mobile Phase A: Methanol with 0.1% Formic Acid

Mobile Phase B: Water with 0.01% Formic Acid

Acquisition Program: Gradient – 6.0 minutes

*IS = Internal Standard

Ordering Information

Acrodisc MS Syringe Filter

Part Number	Description	Pkg
MS-3301	0.2 μ m, 13 mm, WWPTFE membrane	60/pkg
MS-3201	0.2 μ m, 25 mm, WWPTFE membrane	50/pkg

Complementary Products

- **Solvac[®] Filter Holder** – Magnetic filter holder simplifies clean-up and degassing of mobile phase solvents and other solutions.
- **Acrodisc Syringe Filters for HPLC and UHPLC Sample Prep** – Significantly increases column life and improves chromatography.
- **HPLC Mobile Phase Filtration Membranes** – Designed specifically for the stringent requirements of mobile phase filtration. Available in polypropylene, PVDF, PTFE, and nylon.



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