

Thermo Scientific Syringes and Filters

Titan3 and Target2 Syringe Filters

Sample preparation with Thermo Scientific™ Titan3™ and Thermo Scientific™ Target2™ syringe filters help provide consistent and reliable experimental results. Both these products provide high quality filtration solutions for a range of samples and applications. The premium Titan3 range provides even higher levels of confidence due to the robust design characteristics (burst pressures of 120psi for the 30mm range) cleaner extracts due to the inclusion of a pre-filter (most 30mm products) and ease of membrane selection via the color coded ring.

Membrane Selection Guide

Choose a filter or membrane based on:

1. Chemical compatibility of the membrane and housing with your sample matrix
2. Size and amount of particulates in the sample
3. Potential interactions (binding) between the membrane and sample components
4. Special considerations such as requirement for pre-filter or inorganic ion certification

Housings

- Titan3 and Target2 filter housings are manufactured from solvent-resistant, low-extractable polypropylene resins specifically selected for wide compatibility with common HPLC sample matrices
- Solutions at temperatures up to 100°C can be filtered using Target2 and Titan3 syringe filters.
- Syringe filters can be sterilized by autoclave at 125°C for 15 minutes
- The inlet connection is an enhanced female Luer Lock™ fitting designed for extra security when attached to a Luer Lock syringe
- The outlet fitting is a standard size male Luer-slip fitting for ease of filtrate collection
- Target2 polypropylene syringe filter housings meet the requirements of 21 CFR 177.1520



This table offers general guidelines for membrane characteristics and compatible applications.

Membrane Type	Membrane Characteristics	Applications
Cellulose Acetate	Low protein binding, ideal for aqueous-based samples; high protein recovery from filtrate; lower protein binding compared to PVDF	Tissue culture media filtration, sensitive biological samples
Glass MicroFiber	Larger porosity; able to remove large particulates without clogging	Dissolution testing, general filtration
Nylon	Most frequently selected membrane; broad compatibility with aqueous and organic; naturally hydrophilic membrane; extremely low in extractables; excellent flowrate with most sample matrices; not compatible with strong acids or bases	General laboratory filtration; filtration for most samples; HPLC samples NOTE: Nylon binds protein, do not use when high protein recovery is desired
Polyethersulfone (PES)	High flowrates with good throughput volume; low protein binding; compatible with high temperature liquids; mechanically strong membrane low in inorganic extractable ions	PES is certified for ion chromatography; tissue culture filtration; filtration of proteins and nucleic acids
Polypropylene	Hydrophobic membrane has wide chemical compatibility with organic solvents; low nonspecific protein binding	Filtration of biological samples; filtration of aggressive organic solutions
PTFE	Hydrophobic membrane is resistant to nearly all solvents, acids, and bases; membrane is mechanically strong and will withstand exposure to high temperature liquids; low in extractables; PTFE blocks water vapor; can be used to filter aqueous solutions after prewetting with an alcohol. The hydrophilic PTFE option provides the same application and performance characteristic, but does not require prewetting of the membrane when filtering aqueous samples	Filtration of aggressive organic, highly basic or hot solutions, ideal for transducer protectors
PVDF	Hydrophilic membrane with good solvent resistance; low UV absorbing extractables and low nonspecific binding	General biological filtration; filtration of samples where high protein recovery is desired
Regenerated Cellulose	Hydrophilic membrane with good solvent resistance, extremely low nonspecific binding; compatible with nearly all common HPLC solvents; tolerates aqueous samples in pH range of 3 to 12	Membrane of choice for low nonspecific binding applications; Tissue Culture media filtration and general biological sample filtration