



HICHROM

Chromatography Columns and Supplies

SAMPLE PREPARATION MonoTip

Catalogue 9

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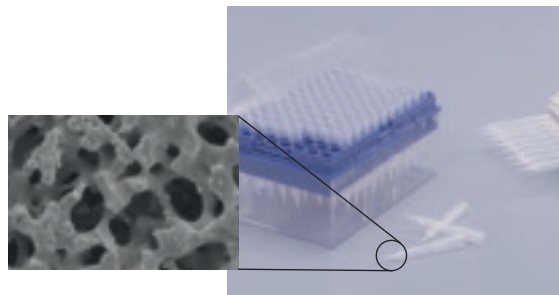
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MONOTIP™

- MonoTip C18 for desalting and enrichment of peptides and proteins
- MonoTip Trypsin for fast trypsin digestion
- MonoTip TiO for phosphopeptide enrichment

MonoTip™ pipette tips, manufactured by GL Sciences, are designed for the purification and enrichment of femtomole to micromole levels of peptides and proteins prior to MALDI-MS and LC-MS analyses. The monolithic silica consists of a double pore structure comprising a network of throughpores and smaller mesopores. This unique monolithic structure contributes to low pressure-drop and strong analyte interactions.

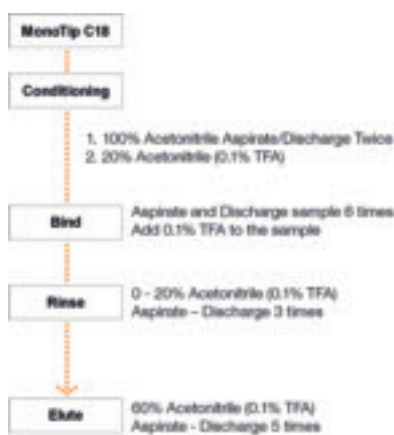


MonoTip Specifications

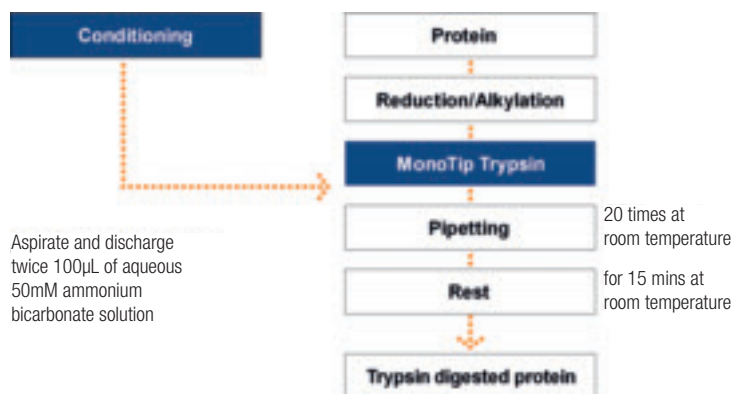
Description	MonoTip C18	MonoTip Trypsin	MonoTip TiO
Tip volume (µl)	200	200	200
Bonded phase	Octadecyl	TPCK treated trypsin	Titanium dioxide coating
Specific surface area (m ² /g)	200	100	200
Throughpore diameter (µm)	10 - 20	10 - 20	10 - 20
Mesopore diameter (Å)	200	300	200
Sample capacity	100µg (angiotensin II)	100µg (denatured BSA) 2.5 BAEE unit/tip	5µg
Sample volume (µl)	20 - 200	20 - 200	50 - 200

MonoTip C18 – An easy pipetting operation enables the enrichment and demineralisation of proteins and peptides. Salts, detergents and other hydrophilic contaminants pass through the tip unretained, whereas target peptides and proteins have a strong affinity for the hydrophobic monolithic silica surface, and can then be recovered in a concentrated and purified form. MonoTip C18 is efficient for peptide and protein samples in the pmol to nmol range with molecular weight up to 40kDa.

MonoTip Trypsin – MonoTip Trypsin pipette tips are designed for the digestion of proteins in proteomic analyses. They consist of TPCK treated bovine pancreas immobilised on monolithic silica, which catalyses the quick digestion of reduced and alkylated proteins at room temperature with just a few simple operations. At 37°C, it usually takes more than 10 hours to digest trypsin. With MonoTip Trypsin, it takes only a few minutes pipetting and an overall operation time of 20 minutes at room temperature.



Operation of MonoTip C18



Operation of MonoTip Trypsin

MonoTip TiO – MonoTip TiO pipette tips contain GL Sciences' silica monolith completely coated with nanoparticles of titanium dioxide (TiO₂). MonoTip TiO pipette tips are used for sample volumes of 50 - 200µl, with approximately 5µg of phosphopeptide bound per tip. Due to the open porosity on the monolith contained in these tips, samples can be eluted with small volumes, thereby substantially concentrating phosphopeptides when compared to the initial loading volume. Please see page 311 for details of the more advanced Phos-TiO kits.

Ordering Information

Description	Pack Size		
	8	24	96
MonoTip C18	5010-21001	-	5010-21000
MonoTip Trypsin	5010-21011	5010-21012	5010-21010
MonoTip TiO ¹	5010-21006	5010-21007	5010-21005

¹ Please note that Phos-TiO columns contain an advanced form of TiO₂ which provides superior performance and allows many individual samples to be processed simultaneously. For new methods, it is recommended to use Phos-TiO products as first choice (see page 311).