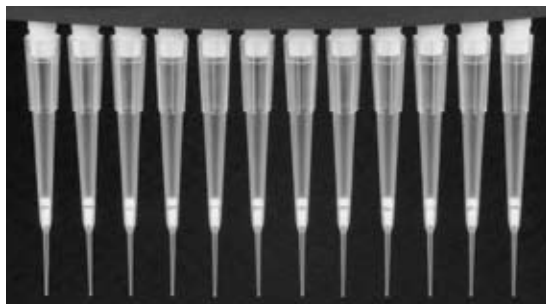


Thermo Scientific Aspire RP30 Desalting Tips

Thermo Scientific Aspire RP30 Desalting Tips purify, desalt, and concentrate peptides or low molecular weight proteins within 20 minutes. The higher peptide binding capacity and recovery of the proprietary resin in comparison to conventional C18 products makes the Aspire™ tips ideal for processing digested complex protein mixtures prior to LC/MS or LC/MS/MS analysis.



Effectively clean up samples before MS analysis. Mass spectrometry methods are important tools for the study of biological compounds. Contaminants such as salts, detergents and other ion-suppressing interference present in biological samples have a negative impact on the ionization process, which affects MS data quality and limits peptide/protein detection. The Thermo Scientific Aspire RP30 Desalting Tips effectively remove these interferences from biological samples, improving sensitivity and data quality (Table A).

Improve Sensitivity and MS Data

Quality – Removes salts, detergents and other ion-suppressing contaminants. Increases signal-to-noise ratios and sequence coverage.

Effective Sample Clean-up Prior to LC/MS and LC/MS/MS Analysis –

Proprietary reversed-phase resin allows superior peptide binding and recovery of digested complex protein mixtures compared to conventional C18 products.

Fast and Easy - 20-minute purification protocol features color-coded parallel sample processing.

High performance reversed-phase tips for pre-LC/MS sample clean-up. The Aspire RP30 Desalting Tips are 200 µl chromatography tips that allow purification of biological samples including digested protein complex mixtures containing up to 30 µg of total peptide or low molecular weight proteins (65kDa or less). The Aspire tip contains a bed of proprietary porous Styrene-divinylbenzene (SDVB) reversed-phase resin which offers superior overall peptide binding and recovery compared to the traditional C18 resin (Figure 1).

Save time with color-coded, multichannel purification protocol.

The Aspire RP30 Desalting Tip 20-minute purification method employs a color-coded, multichannel protocol which streamlines low to medium-throughput sample clean-up (Diagram 1). For additional convenience, the procedure is further optimized on a Thermo Scientific FinnpiPETTE Novus electronic multichannel pipette. The Aspire tips are also compatible with a variety of handheld pipettes.

Thermo Scientific Aspire Desalting Pipette Tips

Ordering Guide

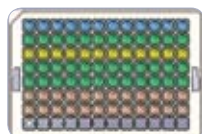
Item No.	Description	Qty
990-01	Thermo Scientific Aspire RP30 Desalting Tips	96 tips/kit

Processing Method	Number of Proteins Identified	Number of Unique Peptides Identified
C18 Trap Column	19	139
Aspire RP30 Desalting Tip + C18 Trap Column	27	212

Data courtesy of Dr. Majid Ghasseman, University of California, San Diego, CA, USA.

▲ **Table A.** Results from 1-hour LC/MS/MS runs of tryptic-digested protein complex samples (mixture of 48 proteins). The Aspire tip further removes salts, detergents and other ion-suppressing interference present in the samples. As a result, peptide fragments are more readily detected and the total number of protein identifications increases.

ALIQOT THE APPROPRIATE REAGENTS TO THE CORRESPONDING COLORED TUBES



ACTIVATE (Row A, blue tubes)



EQUILIBRATE (Row B, green tubes)



BIND (Row C, yellow tubes)



WASH (Row D and E, green tubes)



ELUTE (Row F and G, orange tubes)

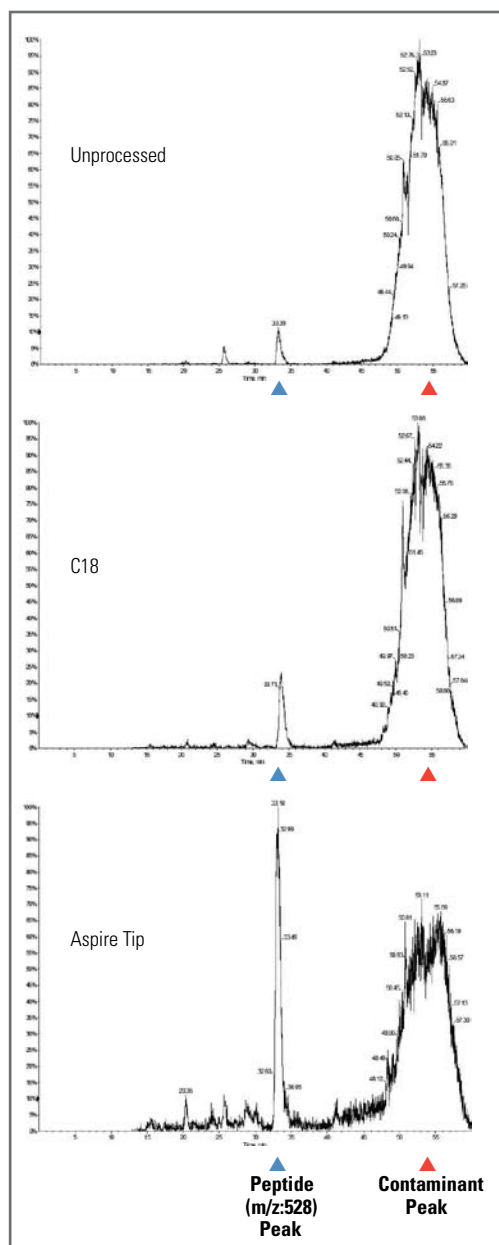


DRY and RESUSPEND



LC/MS/MS analysis

► **Figure 1:** The mass chromatograms of a single ion corresponding to the peptide with the m/z of 528 were extracted and traced. Due to the improved peptide binding and recovery of the Aspire tip, the ratio of the target peptide peak/contaminant peak is substantially higher compared to the unprocessed sample and the sample purified by competitor's C18 product.



Data courtesy of Dr. Majid Ghasseman, University of California, San Diego, CA, USA.

▲ **Diagram 1:** Color-coded, multichannel purification workflow. The multichannel desalting protocol allows parallel sample processing within 20 minutes.