

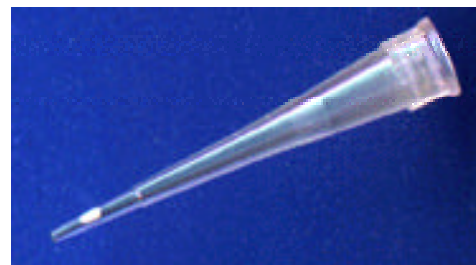
Stylus™ Pipette Tips for Protein Sample Preparation

Now desalt and clean-up a few micro liters of femtomole-level protein in under 30 seconds with The Nest Group Inc.'s Stylus brand of ProTip™ pipette tips for sample preparation. Stylus tips are ideal for preparing samples for Mass Spectroscopy or for other analytical techniques. Unlike other methods, Stylus tips save time by providing a fast, ready-to-use device for off line sample preparation even in the presence of detergents.

Stylus tips are available in three sizes: 1-10µL, 10-50µL and 50-250µL tips containing 1µL, 10µL and 50µL, respectively, of polymeric resin fixed at their end such that there is as little as 0.5µL dead volume.

In operation, a Stylus brand of ProTip™ is placed on a standard single or multi-channel pipettor. The sample is aspirated and dispensed through the low back pressure polymer to bind and wash the polar molecules or small proteins. This can be done even in the presence of detergent, buffer salts or polar organic solvents. Elution is in 1-4µL of water.

The Stylus™ SPTU-001H, 1-10µL ProTip™ fits a Gilson D10 pipettor. At 90% MeCN they can retain a 1600 MW peptide. At 95% they can retain even smaller polar molecules.



General Protocol Information:

Protocol for Detergent Removal from proteins extracted from a gel (where you want to start at 70% MeCN but you don't know if that is a high enough concentration to get it to stick to the Stylus tip).

1. Take 10µL of your sample solution and dilute by adding 25µL MeCN to it.
2. Wash a Stylus HILIC tip with 10µL, 70% MeCN-water.
3. Load the diluted sample from step 1 by repeated cycling (10-20x) of the volume through the tips and save the flow through.
4. Wash the tip with 10µL, 70% MeCN repeated cycling (2-3x) and combine with step 2 to remove salts and detergent. (If at the end it is determined that you proteins did not stick, simply add more MeCN to the saved fraction, and load it on a freshly equilibrated Stylus tip at the higher MeCN concentration.)
5. Elute with <10µL, 70% MeCN repeated cycling (2-3x) and save fraction.
6. Elute with <10µL, 50% MeCN repeated cycling (2-3x) and save fraction.
7. Elute with <10µL, <30% MeCN repeated cycling (2-3x) and save fraction.
8. Load eluates from steps 5-7 onto an MS target to determine which composition eluted your product. Detergents and salts should have come out in the loading steps.

In general, the higher the organic the better the binding. We have to balance the solubility of the sample against the degree of purification desired. Bigger proteins require less organic to bind, unless they are reduced and alkylated.

Small peptides require as much as 95% MeCN. Thus, the following is a general protocol for the smallest size Stylus tips for small peptides.

1. Take 10µL of your sample solution and add 90µL MeCN to it.
2. Wash a stylus HILIC tip with 10µL, 90% MeCN-water.
3. Load the diluted sample from step 1 by repeated cycling (10-20x) of the volume through the tip and save the flow through.
4. Wash the tip with 10µL, 90% MeCN by repeated cycling (2-3x) and combine with step 3 to removed salts and detergent.
5. Elute with <10µL, 70% MeCN repeated cycling (2-3x) and save fraction.
6. Elute with <10µL, 50% MeCN repeated cycling (2-3x) and save fraction.
7. Elute with <10µL, <30% MeCN repeated cycling (2-3x) and save fraction.
8. Load eluates from steps 5-7 onto an MS target to determine which composition eluted your product. Detergents and salts should have come out in the loading steps.

Operating Instructions:

Dilute your sample with MeCN (as above) and aspirate it into an equilibrated tip 5-10x to retain the molecules of interest.
Wash twice with one volume of 80-90% (or as above) MeCN by cycling the volume 2x. Blow out the excess liquid.
Aspirate the required elution volume of water and cycle it 2-3x to elute the peptides. *Some samples require 50 mM formic acid for elution. The need for this must be determined experimentally.*

Ordering: Stylus ProTip replaced by UltraMiniSpin HILIC

Part #	Description	Price
SUM HIL.25	UltraMiniSpin1-10µl, HILIC columns, 25/pk	\$110.00
SUM HIL	UltraMiniSpin1-10µl, HILIC columns, 100/pk	\$361.00

☎ For more information or to place an order, call 800-347-6378 ☎

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