Fluorous NuTips Protocol

NOTE: The following protocols were developed using Cys tagging of peptides with fluorous maleimide, cat # BR013173. Other tagging reagents may require slight modifications.

Product Description: Fluoro*Flash*® NuTips, 10-200 µL size
FTI catalog #: 801-5050

Applications: Used for the enrichment of samples containing fluorous tagged components in proteomics and metabolomics applications. The packing material is physically embedded in the walls, so no filter or supporting matrix is necessary. This reduces the volume of elution and eliminates sources of potential contamination and sample loss. The capacity of this item is for samples 5- 50 µL.

Preparation: Equilibrate NuTip by aspirating 3x with 5-20 µL of 100% MeOH or CH_3CN followed by 5x with 5-20 µL of 60 mM ammonium formate in 50:50 MeOH:H_2O.

Sample loading: Add peptide mixture to 60 mM ammonium formate in 50:50 MeOH:H_2O and aspirate 10x.

Wash: Aspirate/expel 20 µL of 60 mM ammonium formate in 50:50 MeOH:H_2O a total of 5-10x expelling solution each time.

Elute: Aspirate/expel with 100% MeOH to release fluorous tagged compounds from NuTip.

Notes:

1. Other solvent combinations can be used for either the wash or the elution. Solvents range from fluorophobic to fluorophilic in the general order:

$$H_2O < DMSO < DMF<<<MeOH<CH_3CN<acetone<THF$$

If you find the fluorous tagged components are coming out of the wash, then increase the fluorophobicity of the wash solution.

2. Direct spotting of the wash or eluent to a MALDI plate can be conducted. Prewet the target with a amount a small amount water to prevent smearing on the plate. Alternatively collect your wash or eluent in a clean tube.