Sample desalting for mass spectrometry

Revised June 2011 by Lori.

Equipment:
C18 Spec tips, Agilent, cat #A57203
p200 and p1000 pipetmen

You can use a p1000 pipetman to wash and elute spec tips. For each wash, add the required volume into the top of the spec tip, then press a p1000 tip firmly into the spec tip and depress the plunger to drive the liquid through the device.

1. Wet the spec tip by pushing through 200 µl of HPLC grade methanol.
2. Wash the spec tip with 3 x 200 µl 5% acetonitrile/5% formic acid.
3. If your sample does not already contain an acidic ion pairing agent, add formic acid to your sample to 5%. NOTE: Do not pipet concentrated formic acid with plastic pipet tips; use glass.
4. Push the sample through the spec tip. You may pass the sample through twice, washing with 5% acetonitrile/5% formic acid between each pass, if you would like to maximize binding.
5. Wash with 3 x 200 µl 5% acetonitrile/5% formic acid.
6. Elute with 2 x 100 µl 80% acetonitrile/5% formic acid.
7. Speed vac the sample to dryness.

Reagents:

HPLC grade methanol
5% HPLC grade acetonitrile/5% formic acid
80% HPLC grade acetonitrile/5% formic acid

Make solutions with MilliQ or better water. NOTE: Do not pipet concentrated formic acid with plastic pipet tips; use glass.