

The use of pull-down assays to focus non-target sample analysis

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Two of the most powerful tools in identifying unknown chemicals in the environment are bioassays and high-resolution mass spectrometry (HRMS). However, though the bioassay can point us towards an outcome, HRMS in full scan will detect all the compounds in a sample and identifying those of effect can be like looking for a needle in a haystack.

The pull-down assay may offer a solution, it was developed as an in-vitro method to study normal protein interactions. However, any compound that can bind to the active site of the bait protein can also be captured. Thus, using a pull-down assay on a sample with known bioactivity prior to HRMS will filter the sample to only those compounds of potential effect. Presented today will be an introduction to pull-down assays and some preliminary findings from non-target processes.