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(54) **Title:** SELECTIVE DETECTION AND ANALYSIS OF SMALL MOLECULES

(57) **Abstract:** The invention relates to a material, process and method for the selective analysis of small molecules. Particularly the invention provides a material and a technique for the analysis of small molecules excluding other large molecular weight (MW) analytes. The process involves selective detection of low molecular weight molecules from a sample comprising the steps of placing said sample with SBA-15 particles; and subjecting the same to desorption ionization mass spectrometry, wherein low molecular weight molecules are selectively detected over the higher molecular weight molecules. A kit for the selective analysis of small molecules is also provided.

