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# **OLIGOSORBENTS, IMMUNOSORBENTS AND MOLECULARLY IMPRINTED POLYMERS FOR THE SELECTIVE EXTRACTION OF COMPOUNDS FROM REAL SAMPLES**

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The analysis of traces of organic compounds from complex samples needs a sample clean-up before LC or GC analysis to limit the role of matrix effect. Selective materials based on a molecular recognition mechanism can be used for this sample clean-up. Immunosorbents (ISs) based on immobilized antibodies produced towards a target analyte, and molecularly imprinted polymers (MIPs) possessing specific cavities designed for a template molecule have already shown a high potential for the selective extraction of target analytes from complex matrices.

Selective extraction can also be obtained using aptamers, i.e. oligonucleotides, immobilized onto a solid support. Aptamers are able to bind a specific molecule with the same affinity as antibodies. They are less expensive to produce and present a higher stability than antibodies. This support appears also as a good alternative to MIPs especially for expensive analytes.

The aim of this lecture is to present the potential of these different sorbents in terms of selectivity and capacity. Numerous applications to real samples will be presented. The possibility to couple them on-line with LC will be discussed. Miniaturized devices will also be presented.