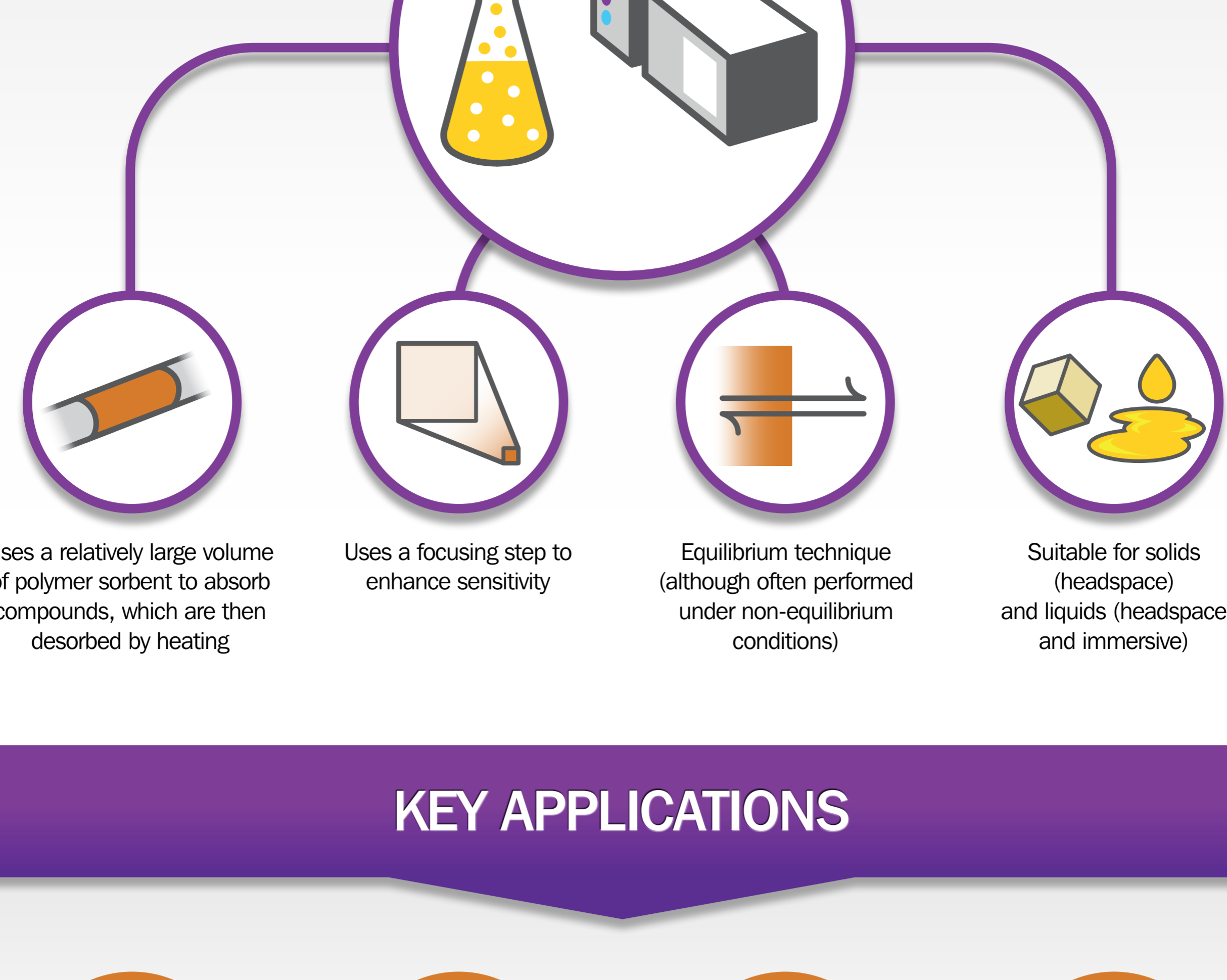


INTRODUCTION TO HIGH-CAPACITY SORPTIVE EXTRACTION



WHAT IS IT?

Sorptive extraction is a technique for getting VOCs and SVOCs from a sample into a GC-MS.



Uses a relatively large volume of polymer sorbent to absorb compounds, which are then desorbed by heating

Uses a focusing step to enhance sensitivity

Equilibrium technique (although often performed under non-equilibrium conditions)

Suitable for solids (headspace) and liquids (headspace and immersive)

KEY APPLICATIONS



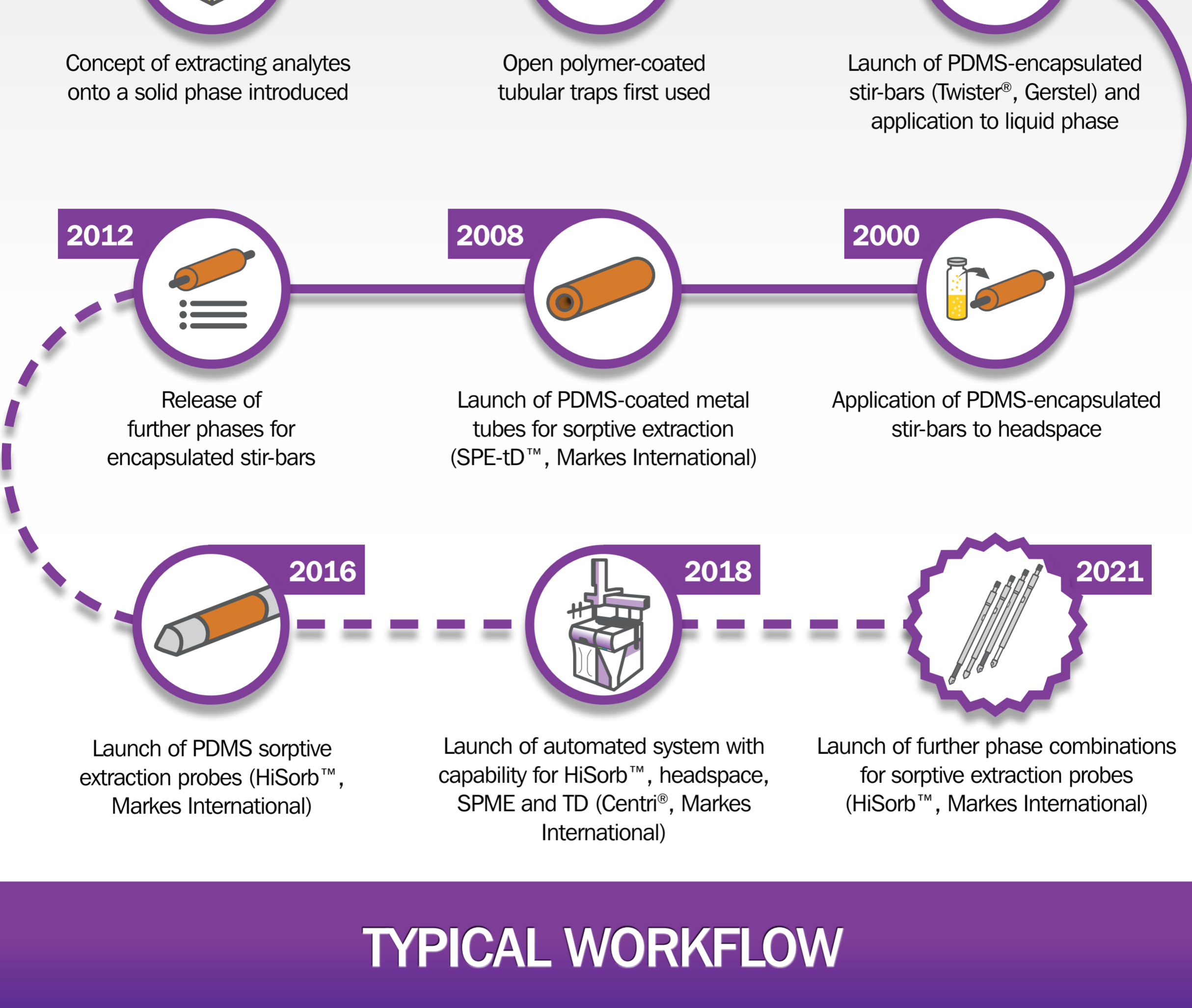
Aroma/flavour compounds in foods and beverages

Pollutants in soil and water

Biomarkers in clinical samples

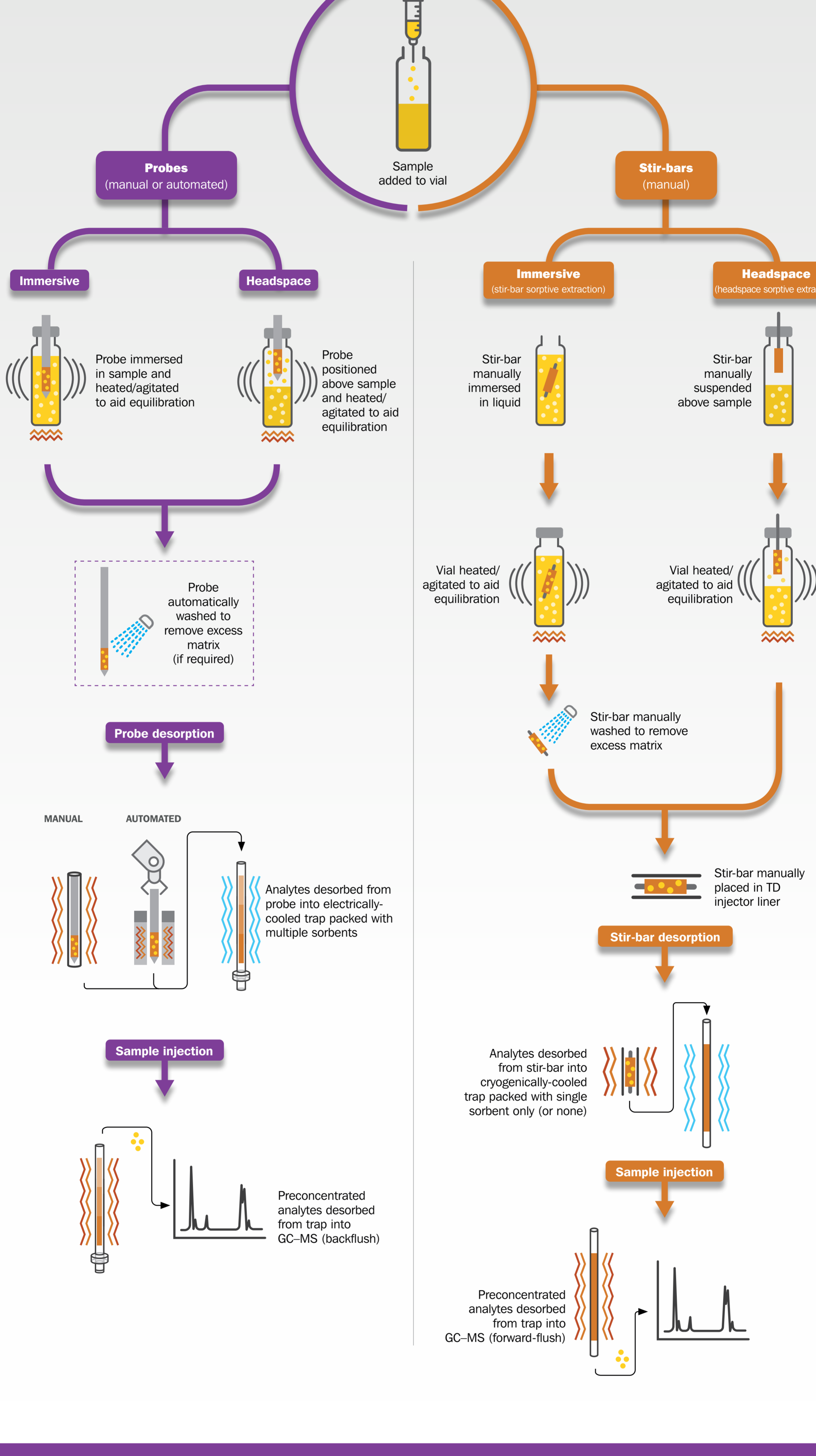
Metabolites in biological samples

HISTORY



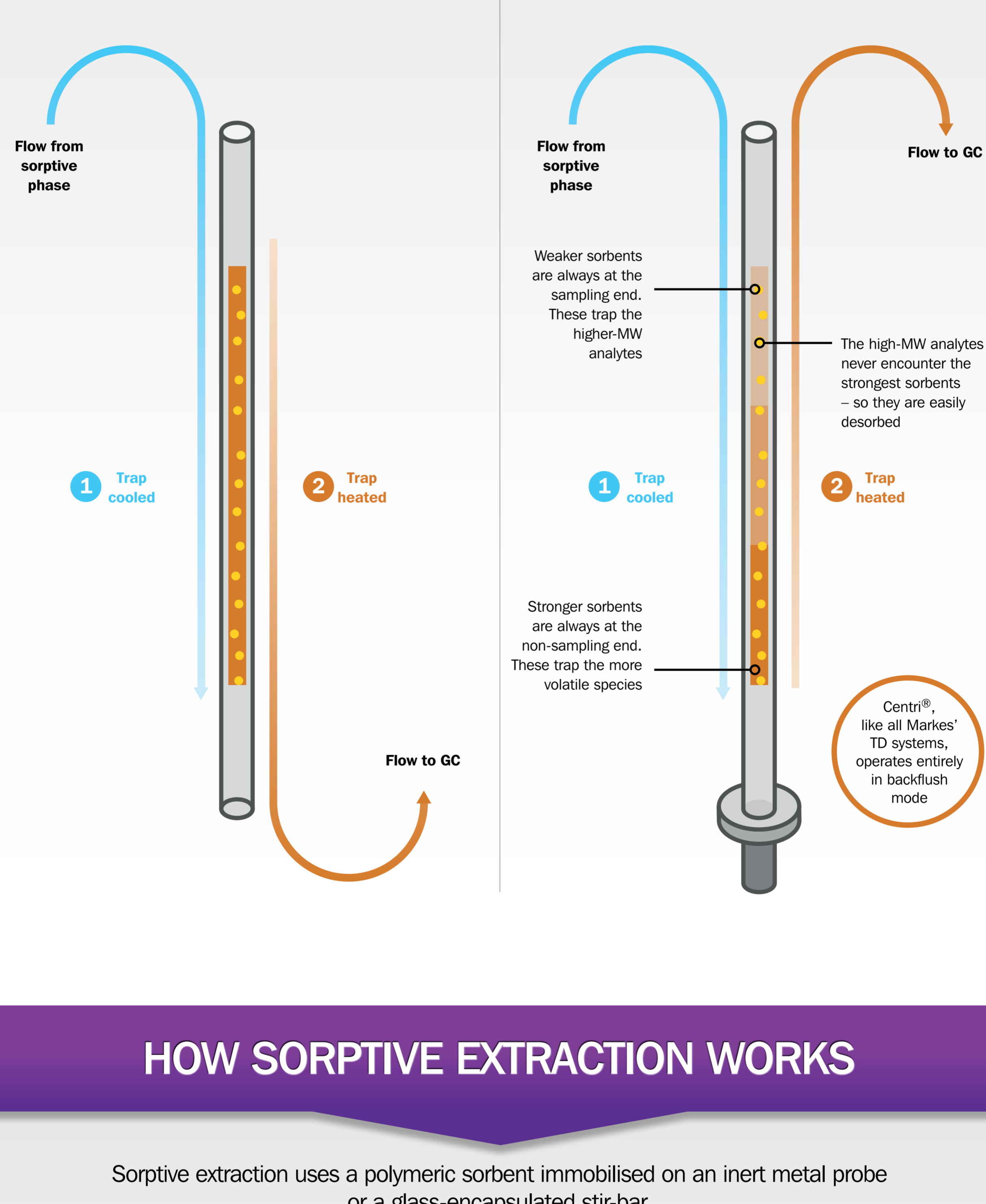
TYPICAL WORKFLOW

The workflow for sorptive extraction depends on whether the sorptive phase is immobilised on a probe or stir-bar.



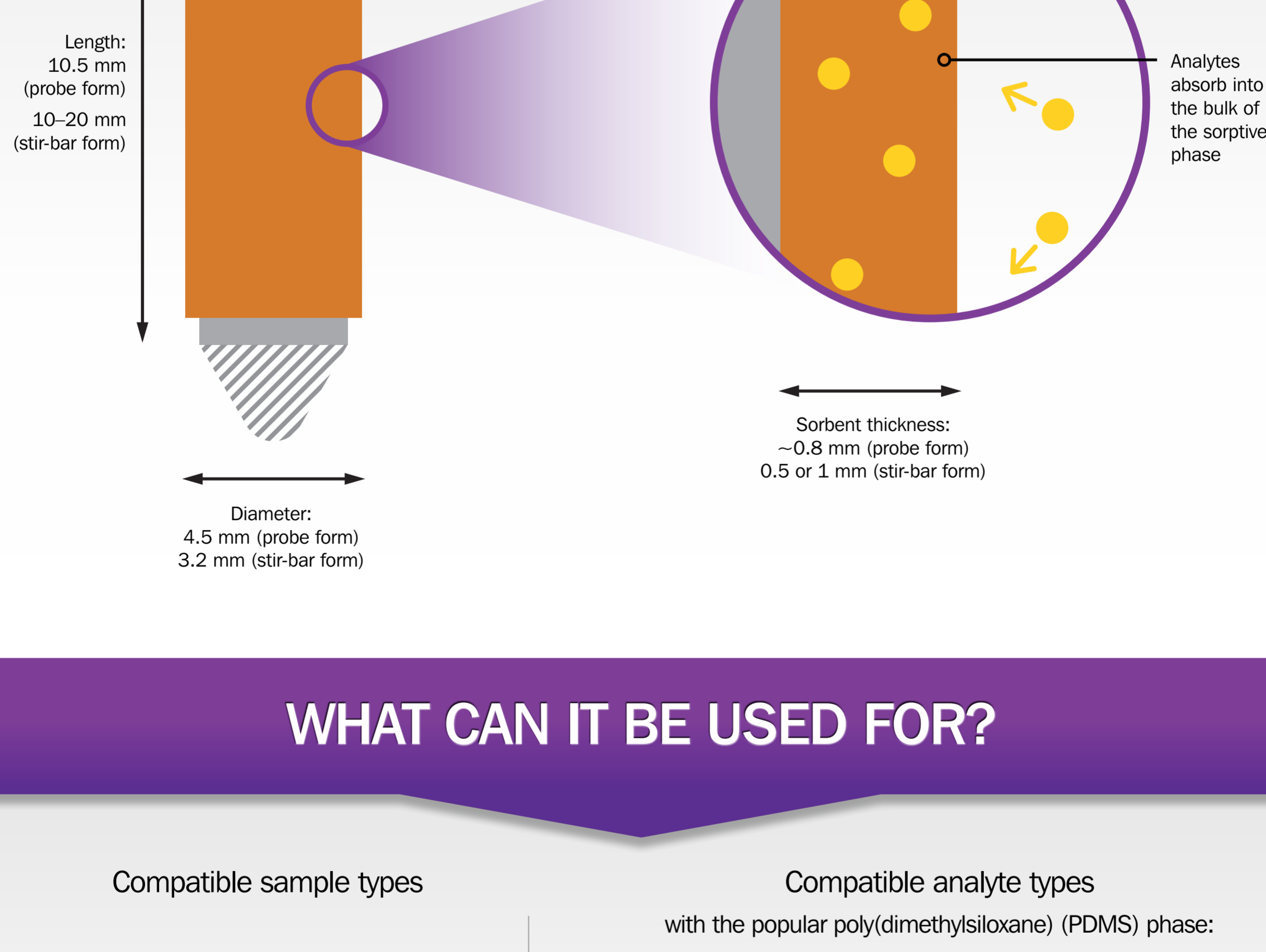
FORWARD-FLUSH OR BACKFLUSH TRAPPING?

The choice of forward-flush or backflush operation is a key factor in determining the analyte range and performance that can be achieved.



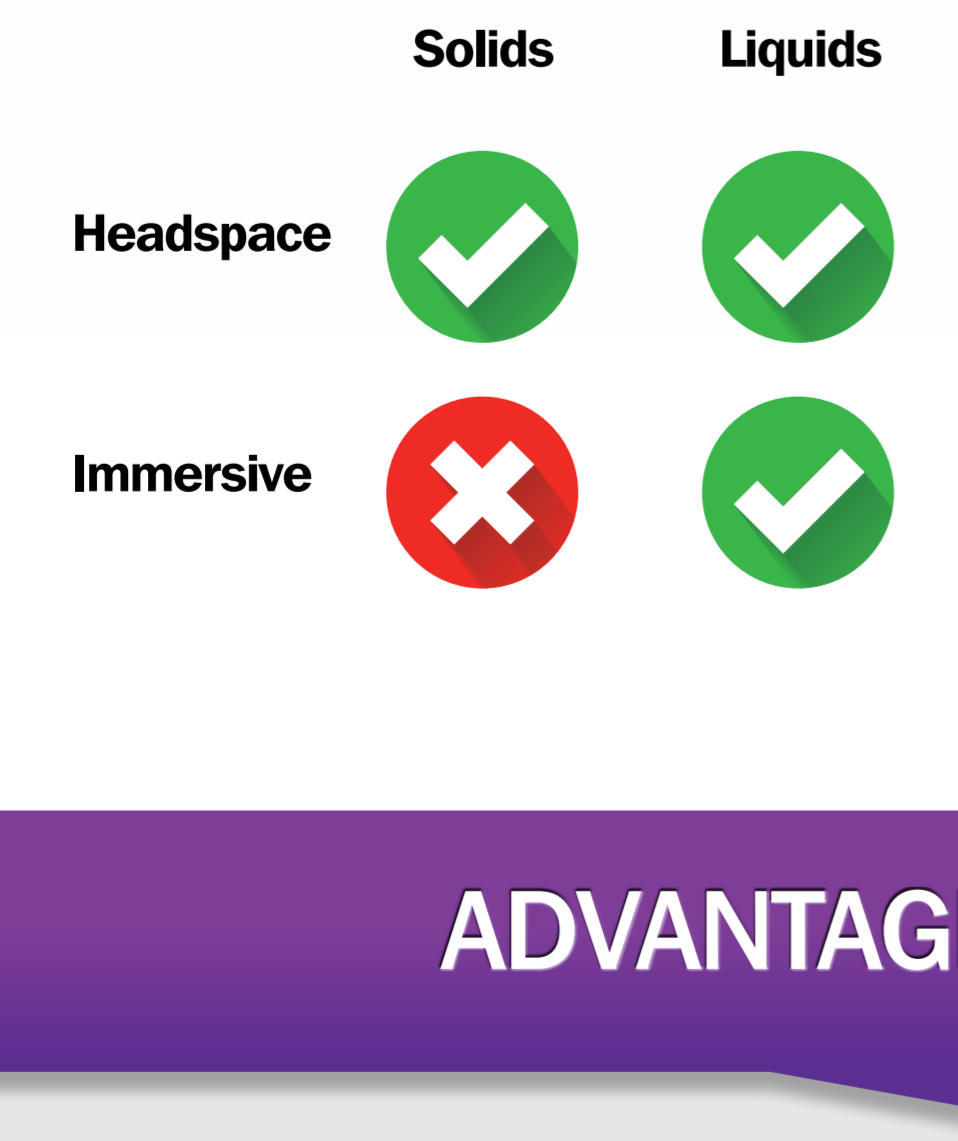
HOW SORPTIVE EXTRACTION WORKS

Sorptive extraction uses a polymeric sorbent immobilised on an inert metal probe or a glass-encapsulated stir-bar.

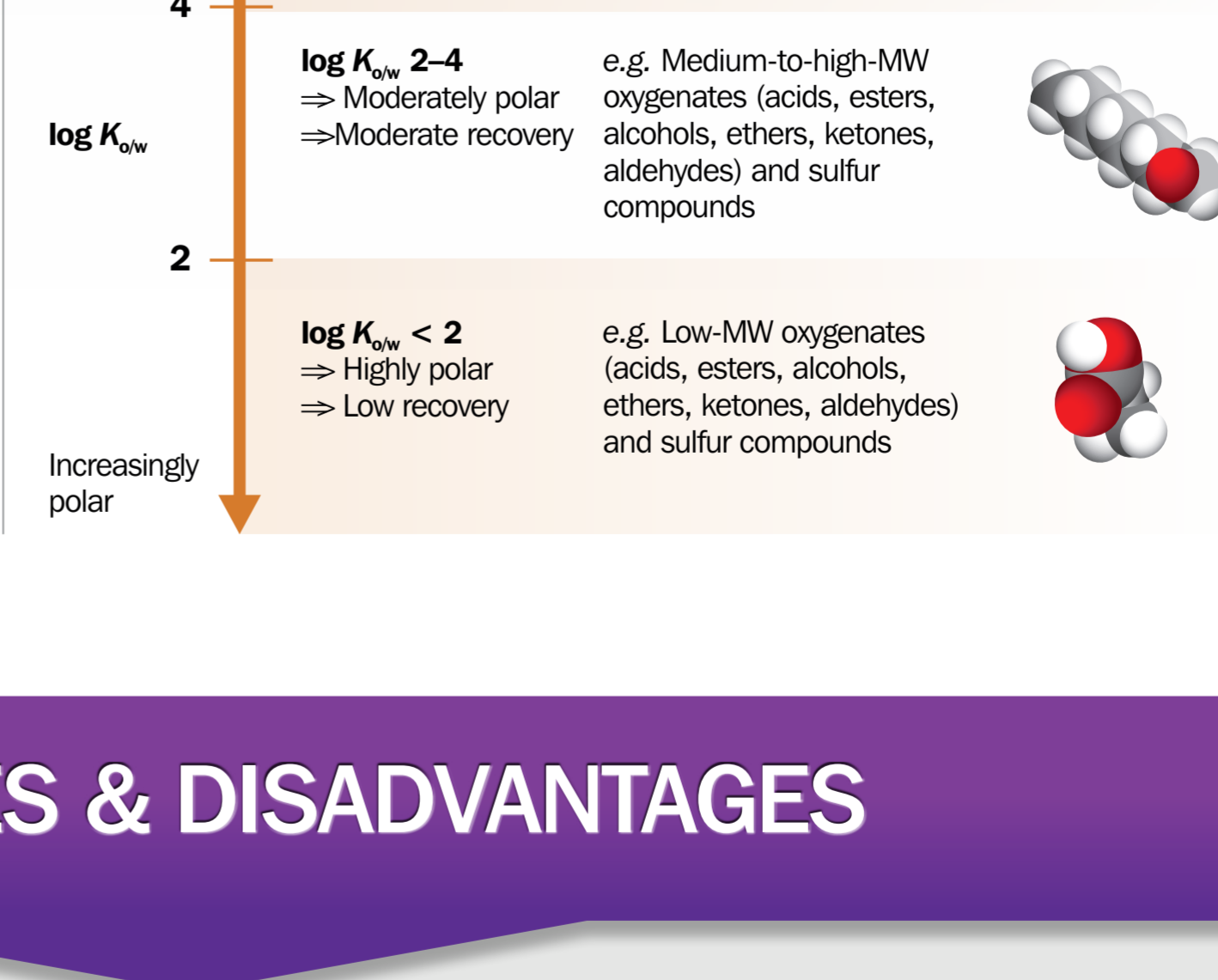


WHAT CAN IT BE USED FOR?

Compatible sample types



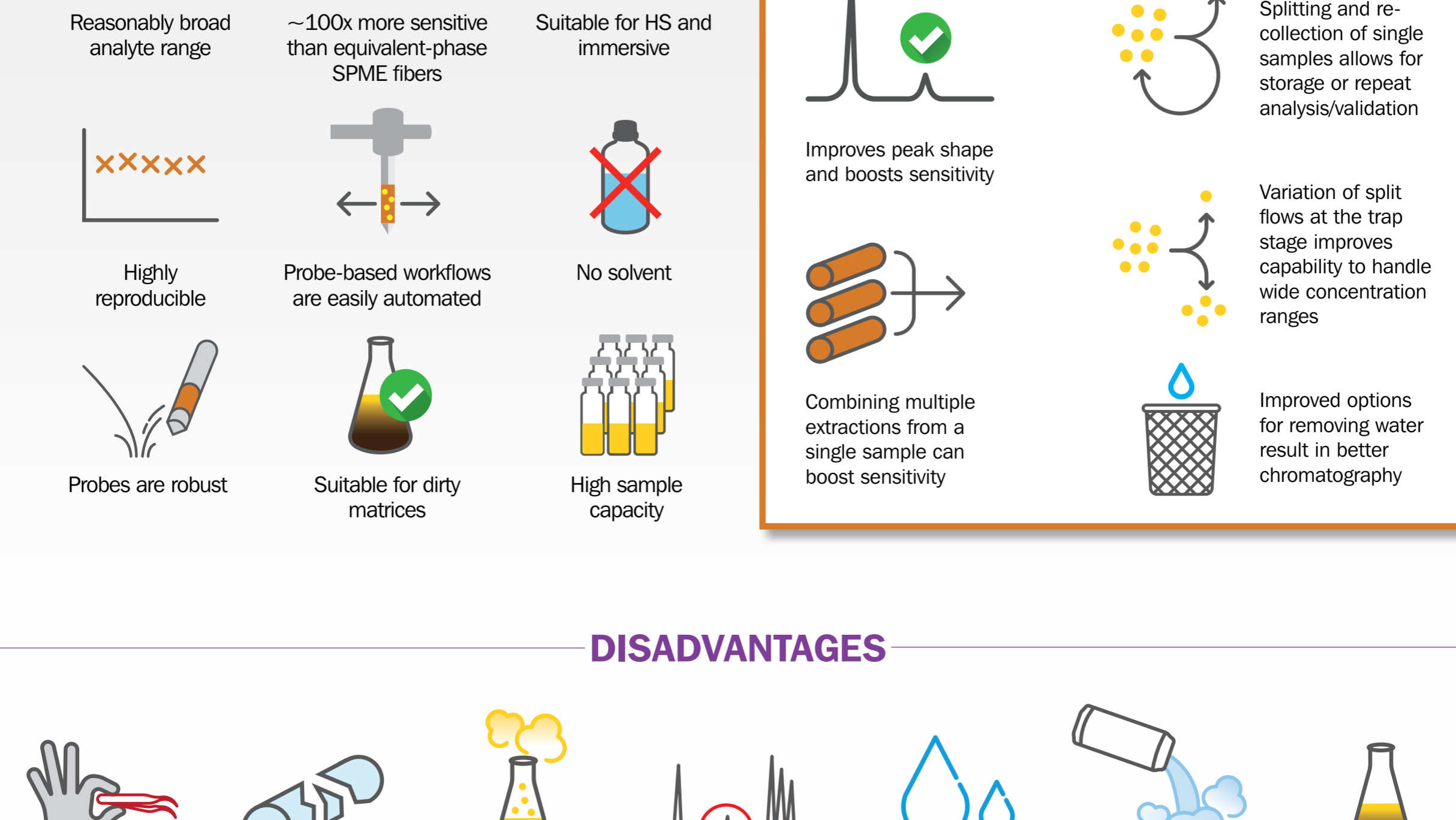
Compatible analyte types with the popular poly(dimethylsiloxane) (PDMS) phase:



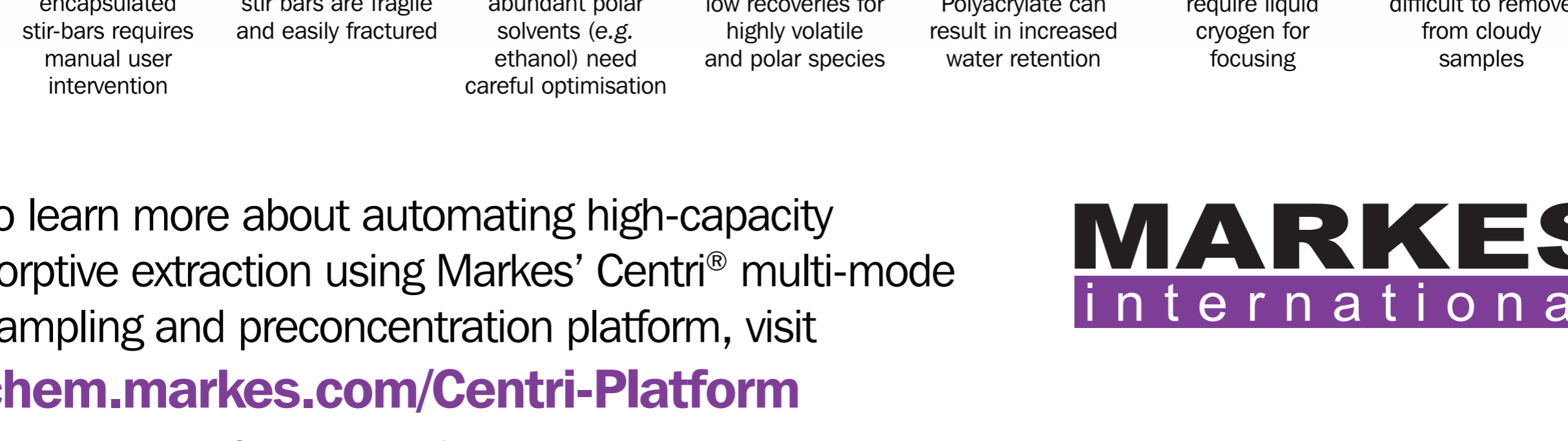
ADVANTAGES & DISADVANTAGES

Sorptive extraction is a versatile technique with a range of benefits, enhanced further by the use of backflush trapping.

ADVANTAGES



DISADVANTAGES



To learn more about automating high-capacity sorptive extraction using Markes' Centri® multi-mode sampling and preconcentration platform, visit chem.markes.com/Centri-Platform



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