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# MagSiMUS

AUTOMATED BIOLOGICAL  
SAMPLE PREPARATION

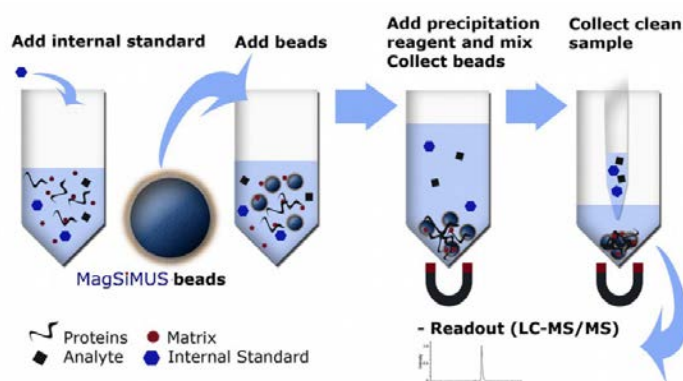


More and more HPLC and mass spectrometry technologies replace the less sensitive and often unspecific immunoassays for the detection and analysis of increasingly complex target analytes in clinical diagnostics and screening laboratories. To reduce matrix effects, a good sample preparation method upfront of these analyses is required to exclude interfering compounds – especially the proteins. All commonly used methods - PPT, SPE and LLE - have specific disadvantages: difficult to automate, time-consuming and/or economically unfavorable.

**MagSiMUS** magnetic bead-based biological sample preparation kits are intended for protein depletion and removal of other interfering compounds from biological samples like whole blood, serum, plasma or urine. They work according to the unique and innovative negative selection technology, which removes the contaminants and leaves the target molecules in the supernatant.

## THE MagSiMUS MAGNETIC BEAD BASED SAMPLE PREPARATION PROCESS

For LC-MS, an internal standard, typically dissolved in reconstitution buffer is added to a clinical sample, e.g. serum, plasma, whole blood or urine. This ensures that the analyte itself and the internal standard undergo one and the same clean-up route. The **MagSiMUS** magnetic bead mix is then added and suspended homogeneously within the clinical sample. Proteins and larger peptides are now precipitated towards the bead's surface by addition of a protein precipitating reagent. The magnetic bead/protein precipitate is then collected by a suitable magnetic separator leaving the target analyte in suspension. The supernatant is clean and can be directly injected into UHPLC or LC-MS/MS.



## MagSiMUS FEATURES

- Reduced matrix effects in HPLC and mass spectrometry
- Quick and complete sample-prep protocol, short run times
- Easy to automate for irregular, medium or high-throughputs
- Works with low sample volumes (cost-reduction)
- No need for centrifugation or the application of +/- pressure



## SELECT YOUR MagSiMUS ANALYTE

A wide variety of target analyte sample preparations can be addressed by **MagSiMUS** kits. Therapeutic Drug Monitoring (TDM), Toxicology and Drugs of Abuse (DoA) screening, vitamins and steroids are current target area examples, but we are continuously developing new **MagSiMUS** protocols and kits.