

Experts in Custom Biomarker Assay Development and Sample Profiling

Precision specializes in the development, validation, and profiling of LC-MS/MS based small molecule biomarker assays.

With decades of experience, the Precision team has developed metabolite biomarkers covering hundreds of metabolites from all chemical classes.

In-house synthesis capabilities for stable isotope labeled internal standards allow for accurate, dependable, and reproducible results.

Applications

- Assays are validated following the fit-for-purpose (FFP) approach, with the level of assay characterization determined by the expected content of use of the data
- Tested parameters include accuracy, precision, specificity, selectivity, recovery, stability, carry-over, and others as required/requested.

Precision Platforms Include

- Sciex Exion UHPLC
- Sciex 5500+ Triple Quadrupole Mass Spectrometer
- Sciex 7500 Triple Quadrupole Mass Spectrometer

Key Advantages

- Precision leverages LC-MS/MS, the “gold standard” methodology, in quantitative analysis of small molecular biomarkers
- Compared to traditional clinical chemistry assays, LC-MS/MS assays are superior in both sensitivity and selectivity
- Molecular mass and fragment-mass based detection is universally applicable to the chemically diverse space of small molecules and allows the parallel measurement of many analytes (multiplexing)
- Precision specializes in multiplexed assays custom-tailored to address the physiochemical diversity of metabolites
- Robust equipment is used for obtaining sensitive, selective, accurate, and precise measurements
- Assays are run with a minimum of 6 to 8 calibrators per analyte
- Precision uses matching stable isotope labeled internal standards for each analyte, which are synthesized in house if not commercially available
- Calibrator and quality control sample precision (% CV) typically <10%
- Requires low sample volume

Custom Assay Development Process

ASSAY DEVELOPMENT

Precision’s objective in custom assay development is to meet your specific requirements

ASSAY VALIDATION

Assay validation assures results are accurate and reproducible

SAMPLE ANALYSIS

Precision is flexible in their ability to utilize many different sample types which can easily be scaled in both large and small amounts