



Aragen's quantitative proteomics sampling capabilities: Accurate and Reproducible Workflows

Advanced and accurate sample preparation methods and workflows are essential for both targeted proteomics applications and discovery-based (untargeted) proteomics applications. Aragen has successfully established accurate and reproducible quantitative proteomics sampling workflows that incorporate optimized cellular lysis, subcellular fractionation, enrichment of selected proteins, and isobaric labelling tools for precise identification and quantitation of protein samples. We have full capacities encompassing expert scientific personnel, advanced and modern instrumentation to provide sampling and labelling methods for both label free and labelled quantification proteomics, which are rapid and cost effective. By leveraging our stand-alone services, our global customers can now focus their efforts on the analysis of the high throughput proteomics data.

Aragen's robust sampling and labelling protocol consists of steps below:

Cell lysis and extraction: Cell lysis is the first step in cell fractionation, protein extraction and purification followed by stabilization to protect extracted proteins from degradation or artifactual modification. Aragen prepares cell lysates using standardized methods enabling gentle processing of fragile cells and preventing degradation of proteins. Post cell lysis, the extract is thoroughly cleaned.

Precipitation and digestion: Many protein research objectives are more easily achieved through the analysis of peptides rather than intact proteins. For these applications, proteins must be subject to a process of denaturation, reduction, alkylation, and digestion. At Aragen denaturants, reducing agents, and endo-proteinases used are of the highest grade to help get the best possible results.



Desalting and concentration: Enrichment of specific target peptides and sample clean-up are required for successful analysis of low-abundance proteins or identification of post-translationally modified peptides. Aragen uses solid phase extraction (SPE) techniques for rapid, selective sample preparation and purification prior to the chromatographic analysis. Purification and concentration of peptides by zip-tips and columns. High-quality kits are used for sample enrichment.

Labelling and fractionation: Mass spectrometry-based proteomics is increasingly becoming the standard to comprehensively analyse proteomes, especially by simultaneously quantifying multiple proteins obtained from differentially treated samples. Aragen's isobaric labelling techniques are designed as effective means to allow the accurate determination of differential expression levels of proteins using mass spectrometry.

To know more about Aragen's sample preparation workflow for proteomics write us at bd@aragen.com

About Aragen:

Aragen Life Sciences is a leading R&D and manufacturing solutions provider for the life sciences industries worldwide. Aragen offers end-to-end integrated or standalone solutions to advance small and large molecule programs from concept to commercialization. Established in 2001, the Company operates through a global network of six sites with a team of 3700+ scientists and 450+ PhDs. Its expertise and experience have enabled over 400+ customers (including 7 of the top 10 pharma companies globally) in advancing their research programs from early discovery through development and commercialization. Aragen's innovative mindset, infrastructure, flexible business models, a clear purpose, and proprietary project management platform have enabled it to effectively scale and service large pharma, biotech, agrochemical, and animal health industries globally. Visit www.aragen.com for more details.

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Conversation

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