Total Sample Preparation Workflow
For Elemental Analysis

MILESTONE
HELPING CHEMISTS

ENVIRONMENTAL

TOTAL SAMPLE PREP WORKFLOW

In environmental testing labs, preparing samples for trace metals analysis can be time-consuming and repetitive, consuming a significant portion of analyst time. The Total Sample Prep Workflow approach addresses challenges like contamination, unsatisfactory recoveries, and limited analyst time. Designed to optimize pre-analysis steps, it aims to reduce analyst time and enhance data quality, consistency, and safety, fostering a more efficient, lower cost, and sustainable lab workflow.

COSTS | QUALITY | EFFICIENCY | SAFETY

ELEVATE CONSISTENCY EFFICIENCY, QUALITY, & SAFETY IN ENVIRONMENTAL ANALYSIS

IN-HOUSE ACID PURIFICATION

Critical for ICP-OES, ICP-MS, CV-AAS, and CV-AFS methods, high-purity acids in metals analysis are often a financial and operational challenge. The digestion process, integral to sample prep, consumes resources and faces risks of contamination and supply chain disruptions. In-house acid purification not only saves costs but also ensures a constant supply of top-quality acids, securing an uninterrupted workflow.

AUTOMATION IN ACID HANDLING

In routine environmental metals analysis prep, adding concentrated acids poses safety concerns, risks contamination, and consumes valuable analysis time. Automating reagent addition not only frees up their time for critical tasks but also eliminates risks associated with acid exposure and errors, ensuring a smoother, safer workflow.

MICROWAVE DIGESTION

Closed-vessel microwave digestion is crucial in the Total Sample Prep Workflow for metals analysis, impacting analysis quality and lab productivity. Vessel construction, handling, and digestion control are critical parameters affecting quality, consistency, and processing time. Optimizing these parameters ensures reliable recoveries, minimizes reprocessing, and shortens analyst time for a streamlined workflow.

SIMULTANEOUS FILTRATION

Filtration is a critical step in removing solid particles from solutions after digestion of environmental samples. Unfortunately, outdated and time-consuming technologies have hindered laboratory workflows. The use of a simultaneous and compact filtration system offers a rugged way to increase productivity and ease of use.

AUTOMATED ACID STEAM CLEANING

Cleaning labware in metal preparations is essential for throughput, efficiency, and workflow. Traditional methods using acid baths are time-consuming, unsafe, and consume high acid volumes. Cleaning within the microwave system limits capacity. Automated acid steam cleaning overcomes these challenges, ensuring superior efficiency, eliminating manual cleaning, and allowing the microwave system to focus on sample digestion seamlessly.

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