



# Analytical Chemistry

With more than 35 years of experience, SRI International's Analytical Chemistry Department has established excellent capabilities in providing a broad range of custom and quality control services to our clients. We develop, optimize, and validate analytical methods. We characterize and test reference standards, bulk chemicals and drug substances, pharmaceutical formulations, small molecules, biologics, peptides, lipids, and proteins for identity, strength, purity, quality, and stability. Our contract services range from method development and validation to the analysis of raw materials, in-process samples, and finished products for a variety of dosage forms. We also perform analysis of drug substances and their metabolites in biological fluids, including identification of the active ingredients as well as impurities and degradation products. SRI has the facilities, professional staff, and experience to provide a spectrum of analytical services.

## HIGH-PRESSURE/PERFORMANCE LIQUID CHROMATOGRAPHY

- UV/Vis, diode array, evaporative light scattering, refractive index, fluorescence, electrochemical, conductivity, radiochemical, and MS-MS detection
- Temperature-controlled column compartments
- Temperature-controlled autosampler trays
- Reverse and normal phase, size exclusion, ion exchange, and gel filtration separations
- Precolumn derivatization

## GAS CHROMATOGRAPHY

- Flame ionization, electron capture, thermal conductivity, nitrogen/phosphorus, and mass spectrometry detection
- Packed and capillary columns
- Gas sampling valves
- Temperature-controlled autosampler trays



*Bridging the drug development gap*

## SPECTROSCOPY

- Fourier-transform infrared
- Ultraviolet/visible
- Polarimetry
- Mass spectrometry (ESI, APCI)
- Nuclear magnetic resonance
- Flame and furnace atomic absorption
- Inductively coupled plasma-atomic emission

## CAPILLARY ELECTROPHORESIS

- Capillary zone electrophoresis
- Capillary electrochromatography
- Micellar electrokinetic chromatography
- Capillary gel electrophoresis
- Isoelectric focusing
- CE/MS and CE/MS-MS

## PROTEIN CHARACTERIZATION

- SDS-PAGE coupled to laser densitometry
- IEF coupled to laser densitometry
- ELISA
- Western and Northern blots
- 2-D gel electrophoresis
- Protein extraction and isolation

## PHYSICAL TESTING

- Dissolution
- Disintegration
- Tablet hardness
- Viscosity
- Bulk density
- Particle size
- Karl Fischer titration
- Melting point
- Osmolarity

## STABILITY STORAGE AND TESTING

- ICH and custom conditions
- Long-term and accelerated storage
- Controlled temperature and humidity
- Photostability (UV and white light)
- Continuous environmental monitoring and alarms
- Emergency electrical backup generator

Work is performed under R&D, GLP, or cGMP conditions depending on the objective of the work. We are regularly audited by our clients and SRI's Quality Assurance Unit and have been inspected by the EPA and FDA. Our responsive staff provides the highest-quality and best-value services; we can work with you as an extension of your in-house capabilities to provide specialized services or overflow relief, or serve as your complete analytical chemistry resource for an entire development program. We complement SRI's programs in formulation development, toxicology, metabolism, pharmacokinetics, and clinical trial materials manufacturing.

## You Make the Call

For further information, contact our Client Services Team:

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