Intertek Allentown
Services Overview

Intertek

Valued Quality. Delivered.

The Intertek Allentown laboratory is located in Allentown, Pennsylvania USA, and employs team of scientists with broad expertise in the analytical characterization of:

- Chemicals and gases used in industrial and electronic applications
- Formulated products, additives, polymers and emulsions
- Materials including catalysts, sorbents, nano-particles and inorganic/organic precursors
- Finished goods (coatings, composites, adhesives, electronic components, medical devices, etc.)

Your Problem Solving Partner

Analytical Testing Service

Technical Consulting

- Intertek Allentown scientists are experts in their fields and experienced in multidisciplinary problem-solving. Consulting services range from short discussions and advice, to more detailed milestone-based program planning.

Problem-Solving

- Our customers often have a problem or product performance observation they want to understand. An analytical scientist will work with the customer to define an appropriate testing plan to investigate the issue. The results will be combined and presented to the customer as a solution to the problem. Applications including reverse engineering, deformulation of complex mixtures and unknown identification.

Methods Development

- We regularly adapt 'routine' measurements for novel sample types, develop new methods based on emerging needs, or develop on-line measurement approaches for your process environment.

Analytical Expertise

Spectroscopy

- Infrared spectroscopy: microscopy, ATR, micro-ATR, photoacoustic, grazing angle/silicon polarizer, TGA-IR, Near IR
- UV-VIS
- Raman: FT-Raman, microscopy and mapping
- Process monitoring using mid-IR, near-IR, and Raman

Microscopy

- Sample prep: microtomy, ultracryomicrotomy
- Scanning Electron Microscopy (SEM) with EDS, STEM, electron backscattered diffraction, field emission, low-vacuum. Remote viewing option.
- Scanning Probe Microscopy (SPM) including tapping, contact, phase contrast, conductive modes and more
- Profilometry: non-contact scanning white light and contact stylus methods
- Optical: polarized light, fluorescence, stereomicroscopy

Metallurgy

- Sample prep and mounting
- Testing: microscopy evaluation, mechanical, structural/chemical (XRF, SEM/EDS)

Surface Science

- Time of Flight Secondary Ion Mass Sepctrometry (TOF-SIMS): elemental and chemical imaging, cold stage, inert sample handling
- X-ray photoelectron spectroscopy (XPS): elemental depth profiling, inert sample handing, ultraviolet photoelectron spectroscopy (UPS) attachment

Service beyond analysis

Clients benefit from years of industrial experience supporting research, development, quality control, product scale-up, and manufacturing.

Analytical Expertise *cont'd*

Mass Spectrometry

- GC-MS: EI, CI, thermal extraction/thermal desorption/GC-MS
- Solids probe MS
- Matrix Assisted Laser Desorption Ionization (MALDI)
- LC-MS: UPLC/UV-TOFMS, ESI, PDA, ASAP-MS

Liquid Chromatography

- HPLC: multiple detectors (PDA, ELSD, CAD, conductivity, RI, coulometric)
- UPLC-MS: multiple detectors (PDA, MS, API)
- Gel permeation chromatography (GPC): multiple detectors (RI, ELSD, CAD, MALLS, viscosity) and high temperature

X-ray Diffraction

- Powder diffraction
- X-ray reflectivity
- Temperature and environmental controls

Thermal Testing and Thermal Hazards

- Differential Scanning Calorimetry (DSC), modulated DSC
- Thermogravimetric Analysis (TGA) including TGA-IR and Simultaneous DSC/TGA (SDT)
- Thermo Mechanical Analysis (TMA)
- Accelerated Rate Calorimeter (ARC)
- Super-Constant Rate Calorimeter
- Thermal Screening Unit (TSU)
- Vapor pressure

Nuclear Magnetic Resonance

- 500MHz, 400MHz, and 300MHz field strengths
- Multinuclear capabilities at all field strengths: 1H, 13C, 19F, 15N, 29Si, 31P, 119Sn, 11B, others available upon request
- Z-gradients for diffusion and gradient-selected techniques
- Multidimensional techniques including COSY, HSQC, HMBC, NOESY, INADEQUATE

Trace Metals Analysis and Functional Analysis

- X-ray fluorescence (XRF)
- Inductively Coupled Plasma-Optical Emission Spectroscopy (ICP-OES)
- High Resolution ICP-MS
- Flame Atomic Absorption/Emission Spectroscopy
- Ion chromatography (IC)
- Ion selective electrodes (ISE)
- Kjeldahl Nitrogen
- Titrimetric/potentiometric analysis
- Karl Fischer water (coulometric and volumetric)

Polymer Separations/Particle Size

- Particle size using: light scattered laser diffraction, dynamic light scattering, sedimentation, capillary flow technique
- Zeta potential

Gas Chromatography

- Refinery Gas Analysis
- Detectors: FID, TCD, RGA, AED, MS
- Headspace for VOC analysis

Sorption Characterization

- Permeation through polymer films: CO2, CH4, He, O2, N2, Ar, H2 (other gases upon request)
- Gas isotherms and BET down to 10K
- Chemisorption or vapor isotherms
- Helium density

Rheology

- Solids rheology (DMA)
- Fluids rheology
- Adhesive testing using Texture Analyzer
- Microhardness testing
- Nanoindentation
- Surface tension

Success from response

Clients benefit from Intertek Allentown's broad suite of analytical tools and wide-ranging problem-solving experience spanning multiple industries.

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Intertek Allentown is your entry point into a broad global network of laboratories providing testing, certification, inspection, auditing, quality assurance and advisory services.

For more information please contact us:

Intertek Allentown

7201 Hamilton Blvd.
Dock #5
Allentown, PA 18195

Tel: 1.610.295.0100

Email: asa@intertek.com

www.intertek.com/analytical-laboratories/asa