

LABORATORY SERVICES

Comprehensive Analytical Services

- Thermochem's two analytical laboratories specialize in the analysis of trace-level constituents in steam condensate for purity analysis; fixed, trace and hydrocarbon gas analysis; cooling water to hyper-saline brine analysis; and corrosion/scale deposit analysis. Our analytical methods were developed over 30 years by Thermochem to overcome the analytical interferences encountered in natural geochemical and complex chemical process samples. The laboratories also provide services compliant with standard EPA, ASTM, and NIOSH methodologies as required for regulatory work.
- Thermochem is a pioneer in low-level reservoir tracer analysis, with development of new tracers and analytical methods for reservoir, interwell tracer testing (vapor, liquid and multi-phase).
- Numerous tracers and analytical methods have also been developed for Tracer Flow Testing (TFT[®]) and separator efficiency testing used in production applications

The Highest Quality Laboratory Serving the Geothermal Industry

- The Top Performing Lab in the 2010 Chevron Round-Robin Blind Gas Analysis Study
- Top Performer in Annual Chevron Round-Robin Blind Produced Water Analysis Studies
- The Only Tracer Lab to Qualify in the 2008 Minas Sumatra Interwell Tracer Analysis Study
- ISO 17025 and KAN-certified in Indonesia

Gas Analysis Services

Instrumentation Includes:

Agilent Gas Chromatographs with packed, capillary and megabore columns, cryogenic LN2 cooling:

- Thermal Conductivity Detectors
- ECD, Flame and Photo Ionization Detectors
- Agilent GCMS 7890/ 5975
- Entech 7150-LN2 Headspace Gas Concentrator
- Tekmar 3100 Purge and Trap Concentrator
- CO₂ and NH₃ Flow Injection Analyzers



Trace Metals, Reservoir Geochemistry, and Corrosion Process Analysis

Instrumentation Includes:

- Varian AA220 Fast Sequential Atomic Absorption Spectrophotometer
- Perkin Elmer Optima 7000DV ICP Optical Emission Spectrophotometer

Reservoir Tracer Testing and TFT Analysis

Instrumentation Includes:

- Agilent 6460 LCMS with Triple-Quad Mass Spec detector
 - Agilent 1260 Infinity Binary Pump
 - Agilent 1260 Standard Autosampler
- Waters Acquity UPLC
 - FLR Multi- λ Fluorescence Detector
 - TUV Dual- λ UV absorption Detector
- Waters 1525 HPLC
 - 2475 Multi- λ Fluorescence Detector
 - 2487 Dual- λ UV absorption Detector
- Agilent 7890 Gas Chromatographs
 - Electron Capture Detector
 - Custom Fluorine-Specific Detector (HFCs)
- Thermo Scientific UltiMate 3000 UPLC
 - Photodiode Array Detector
 - RS Fluorescence Detector



Trace Anion analysis

- Thermo Scientific ICS-1500 Ion Chromatograph
- Thermo Scientific Dionex 5000+ Dual-Channel High-Performance Ion Chromatograph with Eluent Generation

ABOUT THERMOCHEM

Thermochem is a vertically integrated consultancy, service, and OEM instrument firm empowering energy industries since 1985. Our mission is to protect the assets and resources of our clients, ensuring the most efficient use of equipment and resources, through preventing corrosion and scale damage to valuable equipment and providing early detection and solutions to resource problems. We service clients in more than 30 countries, providing chemical engineering solutions and equipment for geothermal energy, oil and gas, combined cycle, cogeneration and fossil fuel power plant projects from our offices and laboratories based in the USA and Indonesia.