

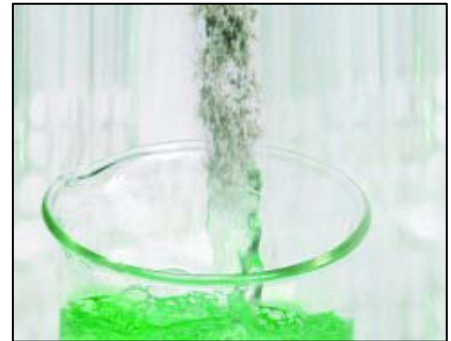
# SGS SERVICES FOR GEOCHEMISTRY

## AN OVERVIEW OF SGS' GEOCHEMICAL CAPABILITIES

No matter where you are, what you want to analyze, what limits of detection, precision or accuracy you require, SGS Minerals Services is the market leader in supplying chemical analysis to the minerals sector. We have the locations, technical strength, independence, consistency and ethical compliance you need. Our unmatched network of over 100 commercial labs, sample preparation facilities and mine-site labs are linked to form a uniform global platform that extends into an unparalleled number of countries and mining camps. Through our unparalleled global network, SGS has the capabilities to provide you with a range of services for geochemical analysis including:

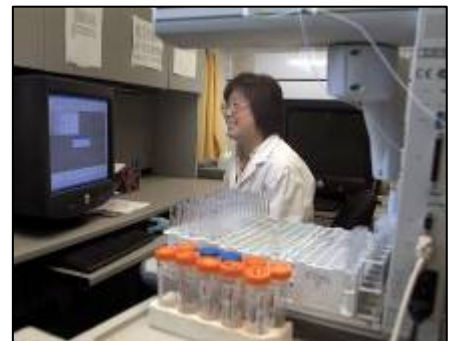
### EXPLORATION SUPPORT

- Geochemical analysis of a vast array of matrices
- Surface water, vegetation, soil, rock, core analyses
- Proven, successful technologies to locate and define deep deposits
- MMI™ orientation surveys, sampling, analysis, results and interpretations
- Organic and inorganic analysis, speciation
- Major, minor, trace, rare earth element and precious metals analyses
- Ultra-trace analysis
- Check assays
- On-site sample prep facilities
- Production and certification of field standards for exploration programs



### LABORATORY ANALYSIS

- Sample preparation
- Exploration and geochemistry assaying and analysis
- Check work
- On-site laboratory support
- Comprehensive environmental sampling and analysis
- Precious metals assaying and analysis
- High Definition Mineralogy



### INSTRUMENTATION AVAILABLE

- ICP-MS, ICP-OES, XRF, XRD
- AA, GFAA, hydride AA, cold vapor Hg
- HPLC, LC, IC
- C, S, N by IR combustion
- TGA, titration, SIE
- Many classical methods including peroxide, lithium, metaborate fusion
- Pb and Ni fire assay for Au, Ag and PGE

## COMMERCIAL TRANSACTION SUPPORT

- Party (settlement) and umpire analysis
- Arbitration expertise
- Metal and metal alloy analysis
- Scrap metal analyses
- Smelter support
- Precious metal analysis
- Catalyst testing services
- Second party/ best practice audits

## ENVIRONMENTAL ANALYSIS

- Chemical/physical parameters
- Anions and speciation packages
- Dusts, respirable silicates, asbestos,
- Complete suite of inorganic analysis
- Organic parameters (pesticides, PCB, BTEX, THM, VOC, PAH, gas, oil, heavy oil, diesel)
- Bacteriological identification and testing
- Chronic toxicity testing
- Leachates and acid rock drainage testing

## INDUSTRY STANDARD PRACTICES AND QUALITY

- Geochemical reference material preparation and characterization
- Due diligence reviews
- Proficiency testing programs
- Independent and secure data hosting
- Lab audits, consulting and technology transfer, licensing
- Accreditations and practices that support NI 43-101, JORC, SAMREC best practice requirements
- Laboratory design

## CERTIFICATION

SGS provides analytical services to all aspects of the minerals industry. As a result, SGS strives to provide the same quality analysis globally from all our laboratories. SGS' Centres of Excellence are ISO/IEC 10725 accredited and most major regional facilities are ISO 9001 certified. Please see [www.sgs.com/geochem](http://www.sgs.com/geochem) for more details.

