



## ALS Salt Lake City, UT Perchlorate Analysis

### Industrial Hygiene

- TO-14, 15
- Beryllium
- Diesel Particulates
- Pesticides and Herbicides Scans
- TO-17
- Silica
- Methamphetamine
- GC/MS Screens
- Metals Panels
- Aldehydes and Amines
- Antineoplastic / Chemotherapy Drugs

### Environmental

- Perchlorate (6850)
- White Phosphorus (7580)
- NDMA
- Explosives/Nitroaromatics
- Vapor Intrusion
- Chemical Agent Breakdown Products by LC/MS
- SW-846 Methods
- EPA CLP
- DoD
- SEDD (Staged Electronic Data Deliverable)

### Microbiology/Mycology

- Non-Viable Fungal Spore Analysis
- Viable Fungal and Bacterial Analysis
- Microbial Identification
- Endotoxins/Mycotoxins
- Coliforms and E. coli 0157:H7

### Dietary Supplements

- Vitamin Analysis
- Pesticides Screens
- Minerals Analysis
- Heavy Metals

**RIGHT SOLUTIONS  
RIGHT PARTNER**

Perchlorate is both a naturally occurring and man-made chemical. Most of the perchlorate manufactured in the United States is used as the primary ingredient of solid rocket fuel. Environmental contamination from the manufacture and improper disposal of perchlorate-containing chemicals has generated great concern for the environment and human health.

In the human body, perchlorate interferes with normal iodine uptake into the thyroid gland. Because iodine is an essential component of thyroid hormones, perchlorate disrupts how the thyroid functions. In adults, the thyroid helps to regulate metabolism. In children, the thyroid plays a major role in proper development in addition to metabolism. Impairment of thyroid function in expectant mothers may impact the fetus and newborn and result in effects including changes in behavior, delayed development and decreased learning capability. Changes in thyroid hormone levels may also result in thyroid tumors.

Since perchlorate (ClO<sub>4</sub><sup>-</sup>) is an inorganic anion, it is highly soluble in water. Not surprising that perchlorate contamination has been found in groundwater and surface water in 14 states.

**ALS Environmental was involved with developing EPA method 6850 and is proficient at providing LOW LEVEL Analysis:**

- Selective monitoring by LC/MS provides positive identification of perchlorate
- Accurate quantitation using an internal standard
- Analysis can be performed on water, soil and biota
- Method tested for difficult sample matrices including saline water with high Conductivity and biota
- Low PQLs below action limits
- Rapid turnaround times available

Limits in Drinking Water (6850):	Practical Quantitation Limit (LOQ):	0.2 µg/L
Limits in Groundwater (6850):	Practical Quantitation Limit (LOQ):	0.2 µg/L
Limits in Soil (6850):	Practical Quantitation Limit (LOQ):	2 µg/Kg
Limits in Biota (6850):	Practical Quantitation Limit (LOQ):	6 µg/Kg
Sampling Requirements:	Volume:	500 mL (water) 4 oz (soil) 500 mL 4 oz amber glass (soil)
	Container:	
	Preservative:	4°C
		Keep out of sunlight as much as possible

ALS Salt Lake City · 960 West LeVoy Drive · Salt Lake City, UT 84123  
Toll Free: +1 800 356 9135 · Phone: +1 801 266 7700 · Fax: +1 801 268 9992



### ALS Environmental Locations Across North America

Canada: Burlington · Calgary · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver · Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Salt Lake City Mexico: Monterrey