

# ANSI-ASQ National Accreditation Board/ACLASS

### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

# Alpha Resources Inc.

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#### **CALIBRATION**

Valid to: January 4, 2014 Certificate Number: AT-1200

## **I.** Chemical (Reference Materials)

| PARAMETER /<br>EQUIPMENT                                    | RANGE                               | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(+)] | REFERENCE<br>STANDARD OR<br>EQUIPMENT        | METHOD(S)                                   |
|---|-------------------------------------|--|--|---|
| Carbon (in Steel, Iron,<br>Nickel & Cobalt Alloys)          | (0.001 to 4.5) g/100 g sample       | 0.002 g/100 g carbon<br>present                                      | Eltra CS-800<br>Leco CS-444<br>Determinators | ASTM E 1019-08<br>ARI-033                   |
| <b>Sulfur</b> (in Steel, Iron,<br>Nickel & Cobalt Alloys)   | (0.002 to 0.35) g/100<br>g sample   | 0.00025 g/100 g sulfur<br>present                                    | CS-800 and CS-444<br>Determinators           | ASTM E 1019-08<br>ARI-033                   |
| Oxygen (in Steel, Iron,<br>Nickel & Cobalt Alloys)          | (0.0005 to 0.03)<br>g/100 g sample  | 0.00015 g/100 g oxygen<br>present                                    | Leco TC-436<br>Determinator                  | ASTM E 1019-08<br>ARI-034                   |
| <b>Nitrogen</b> (in Steel, Iron,<br>Nickel & Cobalt Alloys) | (0.0005 to 0.5) g/100<br>g sample   | 0.0004 g/100 g nitrogen<br>present                                   | TC-436 Determinator                          | ASTM E 1019-08<br>ARI-034                   |
| Oxygen (in Titanium)  | (0.01 to 0.3) g/100 g sample        | 0.00091 g/100 g oxygen<br>present                                    | TC-436 Determinator                          | ASTM E 1409-08<br>ARI-034                   |
| Nitrogen (in Titanium)                                      | (0.003 to 0.11) g/100<br>g sample   | 0.0024 g/100 g nitrogen<br>present                                   | TC-436 Determinator                          | ASTM E 1937-04<br>ASTM E 1409-08<br>ARI-034 |
| <b>Hydrogen</b> (in Titanium)                               | (0.0006 to 0.026)<br>g/100 g sample | 0.000044 g/100 g hydrogen<br>present                                 | RH-404 H-Determinator                        | ASTM E 1447-05<br>ARI-036                   |
| Sulfur (in Coal & Coke)                                     | (0.2 to 3) g/100 g<br>sample        | 0.05 g/100 g sulfur present  | CS-500 Determinator                          | ASTM D 4239-08<br>ARI-035                   |





#### Notes:

- Calibration and Measurement Capabilities (Expanded Uncertainties) are based on approximately a 95% confidence interval, using a coverage of k=2
- 2. This scope is part of and must be included with the Certificate of Accreditation No. AT 1200

Vice President

Coul Greenway



