

Coal

Aim of the Program

This proficiency testing program aims to assess laboratories' ability to competently perform the analysis of coal to AS 1038; and to provide participants with external quality assurance to enhance accuracy and reliability.

Application of the Program to Accreditation

Participation in this proficiency testing program satisfies the requirements of ISO/IEC 17025:2017 – *General Requirements for the Competence of Testing and Calibration Laboratories* for monitoring performance by comparing results with other laboratories.

Program Details

The Coal program is a bi-annual program, i.e. consists of two rounds per year, usually scheduled during April and October.

Participating laboratories receive either one 125g Coal sample and a 15g Coal Ash sample or one 250g Coal sample, a portion of which can be ignited to produce sufficient ash to perform the ash analysis. The types of requested analyses include: Moisture, Ash, Volatile Matter, Gross Calorific Value, Total Sulfur, Pyritic Sulfur, Sulphate Sulfue, Chlorine, Carbon (total), Hydrogen, Nitrogen, Carbonate Carbin, Phosphorus in Coal, Relative Density, Trae Elements – Fluorine, Mercury, Selenium, Arsenic, Boron, Cadmium and Antimony, and Crucible Swelling Number (CSN/FSI).

Ash Fusion (Reducing and Oxidising Atmosphere) - Deformation Temperature, Spherical Temperature, Hemisphere Temperature, Flow Temperature.

Ash Constituents – Silicon as SiO₂, Aluminium as Al₂O₃, Iron as Fe₂O₃, Calcium as CaO, Magnesium as MgO, Manganese as Mn₃O₄, Potassium as K₂O, Sodium as Na₂O, Titanium as TiO₂, Phosphorus as P₂O₅, Sulfur as SO₃, Barium as BaO, Strontium as SrO, Zinc as ZnO.

Statistical Analysis:

A robust statistical approach, using z-scores, is utilised to assess laboratories' testing performance and results are presented for each of the analyses performed by each method. Participants are requested to report an estimate of their measurement uncertainty (MU).

Reporting:

At the conclusion of each round, each participant receives a confidential individual summary sheet, detailing its performance in the program, and a final program report summarising all participant data.

Confidentiality

Each participant is assigned a unique code number, keeping all results anonymous in all PTA reports and publications.

Fees and Further Information

For information on program fees or other enquiries, please contact PTA directly:

Email: ptaenquiry@pta.asn.au