

The G-Probe Programme

The G-Probe microanalytical proficiency testing programme is organised through the IAG and co-ordinated by the United States Geological Survey (USGS). It is designed to evaluate laboratory performance for those labs specialising in the use of microanalytical techniques such as laser ablation ICP-MS and electron probe microanalysis (EPMA) for the analysis of minerals and other geological materials. The programme combines natural and synthetic geologic glasses with pressed powder samples representative of polymetallic sulphides, oxides, corals, bones and organic materials. So far, the materials distributed have been:

- 2008 – basalt glasses
- 2009 – diorite glass, calcium carbonate pressed powder
- 2010 – basalt glasses
- 2011 – basalt glass, spiked soda lime glass
- 2012 – andesite glass, calcium phosphate pressed powder
- 2013 – diabase and gabbro glasses
- 2014 – dolerite and basalt glasses
- 2015 – Mid Ocean Ridge basalt glass, alunite pressed powder

Participating laboratories are provided with two test samples a year by the USGS and are asked to send the organisers their results acquired under routine conditions. The data submitted are evaluated using guidelines established by the GeoPT programme, with an assessment of accuracy based on the z-score approach. Laboratories are provided with feedback on each element, from which the laboratory can decide whether their reported data were satisfactory or possibly affected by unsuspected bias.

Objectives of the G-Probe Programme:

- Evaluate the routine analytical capability of microprobe laboratories on a diverse range of sample types commonly encountered in the field of geochemical analysis.
- Enable participants to evaluate their performance relative to other micro-analytical laboratories using the same or similar techniques.

Further Details

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