

# International Proficiency Test of Analytical Geochemistry Laboratories

*Organised by the International Association of Geoanalysts (IAG).*

## Instructions to analysts

(1) Conduct the analysis according to your normal procedures. This test is designed to evaluate how well your laboratory performs routinely, not how well you could perform when taking special precautions. All measurements must be made on samples that have been dried at  $105\pm 5^\circ\text{C}$  for 2 hours.

(2) Please submit only one results sheet for each registration fee paid. Provide one result only per element or oxide determined, as would be obtained using your routine operating procedures. If your routine operating procedure involves making one determination, report that result. If your routine operating procedure involves reporting the average of two or more determinations, report the average.

(3) Report results using the concentration units requested, with one analytical measurement per analyte. If you have used more than one analytical technique, please identify it with a code letter relevant to the technique description but do not quote more than one analytical result for each analyte. Submission of data should follow your routine procedure when supplying data to customers, but quote results to one more figure than is judged to be significant. Please use the 'full stop' as the decimal point. Please note that transcription errors or use of incorrect units by the participating laboratory cannot be corrected by the organisers.

(4) Results reported as 'not detected' or 'less than' will be disregarded. DO NOT REPORT DETECTION LIMIT DATA.

(5) Please give details of the analytical procedure(s) used. The summary information required is (i) mass of test portion taken for analysis, (ii) the sample preparation/decomposition scheme and (iii) the analytical technique used. **A detailed description of the method is not required.** Although these data are not currently being incorporated when reporting results, they are important for any further (future) analysis of data by technique.

(6) Please enter data on the Results Report Sheet in the column which represents the quality of analytical data that you aim to achieve.

'*Geochemical research*' (data quality 1) means data that is normally used in geochemical research laboratories, usually to model geochemical processes. Usually particular care is taken to ensure such data are of high precision and accuracy.

'*Applied geochemistry*' (data quality 2) refers to analytical results that are used for geochemical mapping or mineral exploration. Although accuracy is important, precision need not be as high as for geochemical research applications and the capability to process a large number of samples is also an important criterion.

(7) The strongly preferred method of submission is to complete the electronic results sheet and to submit it by e-mail as an attached file to 'p.c.webb@open.ac.uk', taking note of the following conventions:

(i) The results sheet is formatted as an Excel 4.0 file and copies may be obtained by download from [www.geoanalyst.org](http://www.geoanalyst.org), or by e-mail from 'e.j.lomas@open.ac.uk'. For other options, see (8).

(ii) Enter data in the appropriate data quality column in units of % *m/m* for the major elements or mg kg<sup>-1</sup> (the same unit as µg g<sup>-1</sup> or 'ppm') for the trace elements.

(iii) Quote results to one extra decimal point to that justified by the precision of the results.

(iv) Use '.' as the decimal point, not ','.

(v) Fe<sub>2</sub>O<sub>3</sub>T is the total iron expressed as Fe<sub>2</sub>O<sub>3</sub>, Fe(II)O is the ferrous iron, CO<sub>2</sub>T is the total carbon expressed as CO<sub>2</sub>, LOI is the loss on ignition (specify temperature in the technique column, do not correct for ferric iron oxidation), H<sub>2</sub>O<sup>+</sup> = 'structural' water remaining after drying at 105 °C.

(vi) On completion, save the file without changing the format and give it the file name 'xxxRnn' where xxx is the GeoPTxxx account number of your laboratory (see address label to the envelope in which these details were sent) and Rnn represents results from Round nn of the GeoPT programme.

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(8) If you are unable to submit results in electronic format, please send a request for a blank results form to be sent to you either by post or fax to:

Mrs E.J. Lomas, Department of Earth Sciences, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK; Fax +44 1908 655151; e-mail: [e.j.lomas@open.ac.uk](mailto:e.j.lomas@open.ac.uk)

then you should complete it and send it to:

Dr P.C.Webb, GeoPT Programme, Department of Earth Sciences, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK; Fax +44 1908 655151; e-mail: [p.c.webb@open.ac.uk](mailto:p.c.webb@open.ac.uk).

(9) Results submitted by post will be acknowledged by post, results submitted electronically will be acknowledged by return e-mail.

(10) Results forms must arrive at the return address by 15th June 2006. Late results cannot be included in the assessment. If you decide to fax results, please also post a top copy so that the organisers can correct errors caused by errors in fax transmission (e.g. indistinct or lost lines of data).

(11) Results from individual laboratories will be confidential to the Steering Committee and will not be communicated to third parties unless authorised to do so by participating laboratories. Although the names and addresses of participating laboratories may be published in the report of the round, it will not be possible to identify which set of data was submitted by an individual participating laboratory unless laboratories sign and return a confidentiality release form.

(12) The Steering Committee reserves the right to publish the report from this round by any appropriate means.

### **Please return your Results Report Sheet by the specified date to:**

Dr P.C.Webb (GeoPT results co-ordinator),  
Department of Earth Sciences,  
The Open University,  
Milton Keynes,  
MK7 6AA, UK.  
FAX (+44) 1908 655151. e-mail: [p.c.webb@open.ac.uk](mailto:p.c.webb@open.ac.uk).