

Criteria for GEOTRACES Compliant Data

Revised by the Scientific Steering Committee (SSC) in December 2023

The following information outlines to investigators how a dataset may be given GEOTRACES 'compliant' status, which would permit the data to be included in the GEOTRACES database and data products.

To start the process of establishing a given dataset as compliant data, the investigator of the dataset concerned should begin by registering the dataset in the GEOTRACES Data for Ocean Research portal (DOoR, <https://geotraces-portal.sedoo.fr/pi/>) and generating the templates for an intercalibration report and for data submission. The completed intercalibration report along with a cruise form (see below) should be submitted to the GEOTRACES Standards and Intercalibration Committee using the DOoR and, in parallel, the data should be submitted to the appropriate data centre (as described in item (iii) below). If the report is approved, the S&I Committee will submit their recommendation concerning the given dataset to the GEOTRACES International Project Office (ipo@geotraces.org) to seek approval by the Scientific Steering Committee (SSC). The SSC will either make decisions during the annual SSC meeting or by email for those proposals arriving out of cycle (i.e., those that require approval prior to the next SSC meeting).

In principle, compliant data concerns measurements of one or more GEOTRACES parameters on a cruise not designated as a GEOTRACES section or process study. To be established as a compliant dataset, the following conditions must all be met:

(i) The measurements should be of a trace element or isotope relevant to the GEOTRACES programme, including, but not limited to, the key parameters (<https://www.geotraces.org/geotraces-key-parameters/>).

(ii) Each dataset must have passed the intercalibration process relevant for that particular parameter (<https://www.geotraces.org/intercalibration-procedures/>), see also the GEOTRACES 'cookbook': <https://www.geotraces.org/methods-cookbook/>. Specifically:

- An intercalibration report should be submitted to the Standards and Intercalibration Committee using a template generated by registering the dataset with the GEOTRACES DOoR (an example of an intercalibration template dully filled in is available at the following GEOTRACES webpage: <http://www.geotraces.org/sic/intercalibrate-data/intercal-report>) For the TEIs to be measured, the request for compliant status must provide information to explain how the intercalibration protocols are met (e.g., analysing consensus reference samples, analysing certified reference materials, collecting duplicate samples to be analysed at a collaborating intercalibrated lab). Results from the analysis of reference samples must be reported together with the main cruise data.

(iii) GEOTRACES Data Management protocols must be followed. Specifically:

- A cruise form must be completed and supplied to the S&I Committee using the GEOTRACES DOoR. The cruise form is available at: <http://www.bodc.ac.uk/geotraces/cruises/documentation/>
- Submission of data and metadata for all datasets, including ancillary data, to the investigator's national data centre (for US, French, Dutch and Chinese researchers) or to GDAC (geotraces.dac@bodc.ac.uk) in a timely manner.

(iv) The dataset must be provided with adequate hydrographic data to interpret the compliant dataset. These include at least temperature and salinity, and, preferably, nutrients and oxygen. Collection of CTD and other data that aid in interpreting compliant datasets should follow GO-SHIP guidelines on how to produce good-quality hydrographic data: <http://www.go-ship.org/HydroMan.html>