

List of Suggested Key Parameters for GEOTRACES Ocean Sections

This is not a list of all TEIs expected to be measured during GEOTRACES. Rather, it represents those TEIs (and related measurements) that are likely to be particularly fruitful to measure on all ocean sections and for which global coverage is highly desirable. It is not envisaged that each of these parameters will be measured at all stations, but that at least some measurements of these key parameters will be made on all GEOTRACES ocean sections.

Key parameter	Examples of use
<i>Trace elements</i>	
Fe	Essential micronutrient
Al	Tracer of Fe inputs (from mineral dust and elsewhere)
Zn	Micronutrient; potentially toxic at high concentration
Mn	Tracer of Fe inputs and redox cycling
Cd	Essential micronutrient; palaeoproxy for nutrient content of waters
Cu	Micronutrient; potentially toxic at high concentration
<i>Stable isotopes</i>	
d15N (nitrate)	Modern and palaeoproxy for nitrate cycling
d13C	Modern and palaeoproxy for nutrient content and ocean circulation
<i>Radioactive isotopes</i>	
230Th	Constant flux monitor in sediments; tracer of modern ocean circulation and particle scavenging
231Pa	Palaeoproxy for circulation and productivity; tracer of modern particle processes
<i>Radiogenic isotopes</i>	
Pb isotopes	Tracer of natural and contaminant sources to the ocean
Nd isotopes	Tracer of natural sources of TEIs to the ocean
<i>Other parameters</i>	
Stored sample	To allow future work
Particles	Essential transport vector for many TEIs
Aerosols	Essential source of TEIs to the surface ocean

Source: GEOTRACES Science Plan