Trace Metal Tape Formats
138 Character Records

Record 1, File Header

Characters 1-3	"001"	Fixed-file type
Characters 4-9	6 numeric	Date of file generation (year, month, day)
Character 10	"1"	Fixed-record type (denotes file header)
Characters 11-21	11 alpha	Vessel (left-justified)
Characters 22-27	6 alpha	Cruise number (left-justified)
Characters 28-44		Cruise dates in form xx/xx/xx-xx/xx/xx (year, month, day)
Characters 45-63	19 alpha	Senior Scientist (left-justified)
Characters 64-105	42 alpha	Investigator and institution responsible for data (left-justified)

Record 2, Sample Header 1

Characters 1-3	"001"	Fixed-file type
Characters 4-9	6 numeric	Date of file generation (year, month, day)
Character 10	'2'	Record type (denotes sample header)
Characters 11-13	"001"	Sequence number of record type*
Characters 14-18	5 alpha	Lab sample number
Characters 19-28	10 numeric	Species Code (VIMS Code) or code for sediment (0000000001) or for water including particulate matter (0000000002)
Character 29	1 alpha	Sex (M-Male, F-Female, blank-both sexes used, unknown or not applicable)
Characters 30-31	2 numeric	Material Analyzed 01-muscle 02-liver 03-digestive gland 04-gonad 05-gills 06-kidney 07-spleen 08-heart 09-brain 10-blood 11-stomach contents 12-top 1 1/2" of sediment core 13-middle 1 1/2" sediment core 14-remainder of sediment core 15-whole organism 16-water 17-particulate matter 18-blends of organisms 19- top 6 inches of sediment core
Characters 32-38	6 numeric 1 alpha	Latitude (degrees, minutes, seconds, hemisphere -N or S)

Characters 39-46	7 numeric 1 alpha	Longitude (degrees, minutes, seconds, hemisphere -E or W)
Characters 47-54		Sample date xx/xx/xx (year, month, day)
Characters 55-57	3 numeric	Sample time (G.M.T. to nearest tenth of an hour)
Characters 58-62	5 numeric	Sample depth (to nearest tenth of a meter)
Characters 68-69	2 numeric	Number of animals in sample (blank if not applicable)
Characters 70-74	5 numeric	Average length of specimens (mm)
Characters 75-80	6 numeric	Average weight of specimens (g)
Characters 81-85	2 numeric	Sample state 01-fresh frozen 02-freezed dried 03-oven dried at 105°-115°C 04-formaldehyde preserved 05-oven dried at 60°C 06-fresh, preserved at 33-40°F 07-raw 08-cooked 09-canned
Characters 83-86	4 numeric	Percent dry (initial determination to hundredths of %. Percent that the dry weight is of the wet weight)
Characters 87-90	4 numeric	Drying temperature-Initial (°C, to nearest degree)
Characters 91-94	4 numeric	Percent dry (at analysis, to hundredth of %. Percent that the dry weight is of the wet weight)
Characters 95-98	4 numeric	Drying temperature-at analysis (°C, to the nearest degree)
Characters 99-100	2 numeric	Navigation 01-Loran A 02-Loran C 03-Radar and/or Fixes 04-Raydist (w/o complications) 05-Raydist (with error, drifting, etc.) 06-Satellite 07-Omega
Characters 101-105	5 numeric	Number of organisms per blend
Characters 106-138	blank	

* The last sample header for each sample is followed by a terminator record with characters 1-10 identical to the last sample header, followed by 998 as characters 11-13, and with all other characters blank.

Record 3, Sample Header 2

Characters 1-3	"001"	Fixed-file type
Characters 4-9	6 numeric	Date of file generation (year, month, day)
Character 10	"2"	Fixed-record type (denotes sample header)
Characters 11-13	"002"	Sequence number of record type*
Characters 14-18	5 alpha	Lab sample number
Characters 19-21	3 numeric	Barometric pressure (in tens, units, and tenths of millibars)
Characters 22-25	4 numeric	Dry-bulb Air temperature (°C to nearest tenth)
Characters 26-29	4 numeric	Wet-bulb Air temperature (°C to nearest tenth)

Characters 30-31	2 numeric	Wind direction (code indicating tens of degrees according to WMO Code 0877)
Characters 32-33	2 numeric	Wind Speed (to nearest knot)
Characters 34-35	2 numeric	Sea direction (code indicating tens of degrees according to WMO Code 0885)
Character 36	1 numeric	Sea height (code indicating height of waves according to WMO Code 1555)
Characters 37-38	2 numeric	Swell direction (code indicating tens of degrees according to WMO Code 0885)
Character 39	1 numeric	Swell height (code indicating height of swell according to WMO Code 1555)
Character 40	1 numeric	Weather (code indicating weather according to WMO Code 4501)
Character 41	1 numeric	Cloud type (code indicating cloud type according to WMO Code 0500)
Character 42	1 numeric	Cloud cover (code indicating percent cloud cover according to WMO Code 2700)
Character 43	1 numeric	Visibility (code indicating visibility according to WMO Code 4300)
Characters 44-47	4 numeric	Secchi disk depth (to nearest tenth of a meter)
Character 48	1 numeric	Turbidity Measurement Technique 1-Turbidometer in JTU 2-Transmissometer, in % light transmission over 10cm path
Characters 49-138	Blank	

* The last sample header for each sample is followed by a terminator record with characters 1-10 identical to the last sample header, followed by 998 as characters 11-13 and with all other characters blank.

Record 4, Data Record

Characters 1-3	"001"	Fixed-file type
Characters 4-9	6 numeric	Date of file generation (year, month, day)
Character 10	"3"	Fixed-record type (denotes data record)
Characters 11-13	3 numeric	Sequence number of record type*
Characters 14-18	5 alpha	Lab sample number
Characters 19-28	10 numeric	Species Code (VIMS Code) or Code for sediment (0000000001) or for water (0000000002)
Characters 29-30	2 alpha	Element analyzed (standard element abbreviation)
Characters 31-33	1 alpha 2 numeric	Method of Analysis W-data expressed on wet weight basis D-data expressed on dry weight basis followed by 01-Milford dry ashing method 02-Repetitive wet ash method using 30ml HNO_3 03-Mercury Analysis-flameless AA 04-Standard sediment method-50% HNO_3 extraction 05-Kosiesza-Anal. Services, Inc., Arsenic method 06-Kosiesza-Anal. Services, Inc., Cd,Cr,Ph method 07-Nondestructive neutron activation 08-Milford arsenic method 09-Mercury in sediment, EPA aqua regia method

			10-Wet ash, concentration HNO_3 Method of "Marine Pollution Monitoring: Strategies for a National Policy" edited by E. Goldberg, Scripps Institution of Oceanography
			11-EPA multielement sediment extraction procedure (HNO_3, HCL, H_2O_2)
			12-PIXE
Characters	34-41		Date of analysis in form xx/xx/xx (year, month, day)
Characters	42-49	each 8 numeric	Concentrations - up to 8 fields for replicates from the same sample (i.e. replicates from same bethic grab, fish, organ, water bottle, etc.) in parts per million of wet weight (E Format)
	50-57		
	58-65		
	66-73		
	74-81		
	82-89		
	90-97		
	98-105		
Characters	106-113	8 numeric	% Blank Concentration (format as concentrations)
Characters	114-121	8 numeric	Standard deviation of same Sample (format as concentrations)
Characters	122-129	8 numeric	Mean of seperate samples (format as concentrations)
Characters	130-137	8 numeric	Standard Deviation of seperatte samples (format as concentrations)
Character	138	1 numeric	Number of replicates

* The last record of each sample is followed by a sample terminator record with characters 1-10 identical to the last data record, followed by 998 as characters 11-13, and with all other characters blank. The last sample terminator of the file (at the end of all data) is followed by a file terminator record with 999 in characters 11-13 (characters 1-10 identical to the last data record, and with all other characters blank).