

EIM Help – Composite Samples

Version 2.0
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Composite sampling is a technique whereby multiple temporally or spatially discrete media or tissue* samples are combined, thoroughly homogenized, and treated as a single sample. Composite sampling can improve spatial or temporal coverage of an area without increasing sample number. Appropriateness of composite sampling is dependent upon the sampling objectives and the site characteristics.

How to Enter Location Information for Composite Samples

Spatial Composite

For a composite sample consisting of multiple samples taken from different locations throughout a site and combined together for analysis, create one location in EIM which represents that composite sample.

The coordinates for the location should be the “centroid” of the individual sampling points which comprise the composite sample.

The Location Description should explain that the location represents the centroid of the composite sampling locations and where the samples were generally located.

Location ID (A)	Location Name (B)	Location Description (D)	Horizontal Coordinates Represent (AE)
VCNW0001_SS-1	VCNW0001 Speedy Gas Station_SS-1	Centroid of sampling locations for Soil Sample 1 composite sample. Located on North Side of Gas Station.	25 (centroid of monitoring area)

Temporal Composite

For a composite sample of individual samples taken at the same location, but spaced by sampling time, create one location in EIM to represent that sampling point. Fill out the following fields accordingly:

Location ID (A)	Location Name (B)	Location Description (D)	Horizontal Coordinates Represent (AE)
VCNW0001_WA-1	VCNW0001 Speedy Gas Station_WA-1	Northwest end of dock on Lake Potter	24 (discreet monitoring point)

How to Enter Result Data for Composite Samples

Field Activity Start Date (Column F) & Field Activity End Date (Column H): Field Activity Start Date is always required. Field Activity End Date can be used for composites that are taken over more than one day.

Field Activity Start Time (Column G) & Field Activity End Time (Column I): Field activity start and end time can be used if appropriate.

Field Activity Comment (Column J): Include any information which explains what the composite sample represents including how many samples comprise the composite and what time they were taken, if appropriate.

Field Activity Area (Column K): Enter the approximate size of the geographical area in which the composite samples were taken (e.g. 200).

Field Activity Area UOM (Column L): Units of measure associated with your defined Field Activity Area (e.g. ft²).

Field Activity Upper and Lower Depth, UOM, Field Activity Reference Point (Columns M - P): If compositing samples across a depth profile, such as water column or sediment core samples, use the guidance [Entering Samples from Multiple Depths Help Document](#) to fill in these four fields.

Sample Composite Flag (Column V): Each result in the composite sample should be marked with a composite Flag "Y."

Collection Method (optional): (Enter in one of the following - Sample Method Code 1 thru 4, Columns AB – AE): If you do not see the collection method that you need in the online reference tables list, contact us and we will add it.

Collection Method Examples (see EIM method reference table for additional methods):

Method Code	Method Description
COMP-SEDSPOON	Composite sediment samples from different locations by scooping with stainless steel spoon into stainless steel bowl, then thoroughly stirring to homogenize. Decontamination follows Ecology SOP EAP040.
COMP-FISHTISSUE	Composite fish tissue samples by homogenizing equal aliquots of individually homogenized fish tissue following Ecology SOP EAP007.
COMP-CT-VPFR	Constant time/volume proportional to flow rate*
COMP-CV-CFVI	Constant volume/constant flow volume increment*
COMP-CT-VPFVI	Constant time/volume proportional to flow volume increment*
COMP-CT-CV	Constant time/constant volume*

*Compositing methods established in Ecology SOP for Automatic Sampling for Stormwater Monitoring:
http://www.ecy.wa.gov/programs/eap/qa/Agency/ECY_SOP_AutomatedSampling_v1_0.pdf.

For tissue data, please see additional business rules which govern tissue data entry, including tissue composite samples.

Revision History

Revision Date	Revision No.	Summary of Changes	Reviser(s)
12/23/09	1.0	Original Document	CN, KC, CL
6/13/11	1.1	Updates to reflect changes to location spreadsheet	CN