

**Data Acceptability Criteria for analysis of sediment total organic carbon and sediment grain size.**

<b>QA SAMPLE</b>	<b>QA MEASURE</b>	<b>MINIMUM FREQUENCY</b>	<b>CRITERIA</b>	<b>CORRECTIVE ACTION</b>
<b>Method Blank</b>	<b>Contamination</b> by reagents, laboratory ware, etc.	One per batch. Grain size: N/A	< MDL or < 30% of lowest sample	Identify and eliminate contamination source. Reanalyze all samples in batch. Qualify data as needed.
<b>Certified Reference Material</b>	<b>Accuracy</b>	TOC: every 15 samples. Grain size: N/A.	Within 95% confidence interval of the certified value	Review raw data quantification reports. Check instrument response using calibration standard. Recalibrate and reanalyze CRM and samples. Repeat analysis until control limits are met.
<b>Replicates</b>	<b>Precision</b>	One per batch	RSD < 20% precision	Check calculations and instruments. Recalibrate and reanalyze. If problem persists, then identify and eliminate source of imprecision and reanalyze.
<b>Laboratory control material (LCM)</b>	<b>Accuracy &amp; Precision</b>	One per batch of 20 or fewer samples. Grain size: N/A	Within 20–25% consensus value	Review raw data quantification reports. Check instrument response using calibration standard. Recalibrate and reanalyze CRM and samples. Repeat analysis until control limits are met.

MDL = method detection limit; RPD = relative percent difference; RSD = relative standard deviation

**Sediment TOC**

Blanks and a reference material supplied by the instrument manufacturer, Coulometrics, Inc. will be analyzed a minimum of three times daily during sample analysis.

**Grain Size**

Standard reference materials will be analyzed with every batch of samples. These include NIST SRM 1003b glass spheres and a narrow-sized garnet standard supplied by the instrument manufacturer. In addition, at least one sample in twelve will be analyzed in duplicate to determine precision. The precision criterion is  $\pm 20\%$ .