



QSM 6.0 Supplemental Information, Version 3

August 07, 2024

Supplemental information sheets provide minor corrections or clarifications to requirements outlined in the Department of Defense (DoD) and the Department of Energy (DOE) Quality Systems Manual (QSM). The supplemental information is version specific, and changes will be incorporated in the next revision of the DoD/DOE QSM. Supplemental Information used along with the QSM provides requirements for laboratory accreditation.

QSM 6.0 Requirement	Supplemental Information: 02/08/2024
Table B-24 Matrix Duplicate QC Check	The matrix duplicate requirement identified in Table B-24 of QSM 6.0 may be omitted for matrices other than AFFF.
QSM 6.0 Requirement	Supplemental Information: 03/11/2024
Module 1 Clause 4.1.1	<p>The laboratory shall perform proficiency testing (PT) for individual isomers if the isomers are listed individually on the laboratory's Certificate of Accreditation.</p> <p>For example, if the laboratory lists m and p-xylene and o-xylene separately on the Certificate, the analytes shall be reported separately during PT, but if the laboratory only lists total xylene on the Certificate, only total xylenes shall be reported.</p>
Module 2 Clause 6.2.10	"Radioactive samples" are samples sent by a customer for radiological testing.
Module 6 Clause 7.1.5.c.ii.c	<p>Background subtraction measurements for gas-proportional and semiconductor alpha/beta detectors shall be performed monthly.</p> <p>Changed from quarterly.</p>
Module 6 Clause 7.3.3.a.x.b	<p>The Duplicate Error Ratio (DER) between the sample and the Matrix Duplicate is ≤ 3.</p> <p>Changed from < 3.</p>
Module 6 Clause 7.3.3.a.x.c	<p>The relative percent difference (RPD) is less than or $\leq 25\%$.</p> <p>Changed from $< 25\%$.</p>

CLEARED
For Open Publication

Aug 07, 2024

QSM 6.0 Supplemental Information, Version 3

August 07, 2024



QSM 6.0 Requirement	Supplemental Information: 03/11/2024
Module 6 Clause 8.5.1.c.ii	<p>Each Cell/Detector pair efficiency shall be verified at least annually. The continuing efficiency for each Cell/Detector pair shall be within 25% of the initially determined efficiency.</p> <p>Changed from + 25%.</p>
Module 6 Clause 8.5.3.a.v	<p>The acceptance criteria for the method blank shall be $Z_{\text{Blank}} \leq 3$ or within laboratory-developed criteria of ± 3 standard deviations of the mean.</p> <p>Changed from $Z_{\text{Blank}} < 3$ and + 3 standard deviations.</p>
Module 6 Clause 8.5.3.b.iii	<p>The LCS shall meet customer specified requirements, acceptance criteria of $Z_{\text{LCS}} \leq 3$, or laboratory-developed acceptance criteria of ± 3 standard deviations of the mean that are within 25% of the known LCS value.</p> <p>Changed from $Z_{\text{LCS}} < 3$ and + 3 standard deviations.</p>
QSM 6.0 Requirement	Supplemental Information: 08/07/2024
<p>Table B-3 QC Check Sample Preparation and Processing</p>	<p>Note: Drying/grinding may not be appropriate for all analytes</p>
<p>Table B-3 QC Check Matrix Spike (MS)</p>	<p>Reported analytes may be spiked into the MS after analytical subsampling.</p>
<p>Table B-3 QC Check Matrix Spike Duplicate (MSD) or Matrix Duplicate (MD)</p>	<p>Reported analytes may be spiked into the MSD after analytical subsampling.</p>

QSM 6.0 Supplemental Information, Version 3

August 07, 2024



QSM 6.0 Requirement	Supplemental Information: 08/07/2024
<p>Table B-8 QC Check Laboratory Control Sample Duplicate (LCSD)</p>	<p>The LCSD QC Check row shall be added to Table B-8.</p> <p>The Minimum Frequency: If sufficient sample is not available for either a MSD or MD, one LCSD shall be included in the preparatory batch.</p> <p>Acceptance Criteria: Recovery: Same as LCS acceptance criteria. Precision: RPD of all analytes \leq 20% between LCS and LCSD</p> <p>Corrective Action and Qualification Criteria: Where an assignable cause isolated to only the LCSD is identified, the LCSD may be reanalyzed. Otherwise, reprepare and analyze the LCSD and all affected QC and field samples in the associated preparatory batch if sufficient sample material is available.</p> <p>If the samples cannot be reprepared and analyzed, apply qualifier to affected analyte results of all samples in the associated preparatory batch and explain in the case narrative.</p>
<p>Table B-18</p>	<p>Table B-18 should be titled Alpha and/or Beta Particles by Gas Flow Proportional Counting.</p> <p>Changed from Alpha and Beta Particles by Gas Flow Proportional Counting</p>
<p>Table B-19</p>	<p>Table B-19 should be titled Radioactive Nuclides by Liquid Scintillation Counter Analysis</p> <p>Changed from Table B-19. Tritium in Water by Liquid Scintillation Counter Analysis</p>
<p>Table B-22 QC Check Instrument Sensitivity Check</p>	<p>All reported analytes for the ISC shall be within \pm 35% of true value.</p> <p>Changed from All reported analytes and surrogates within \pm 20% of true value.</p>

QSM 6.0 Supplemental Information, Version 3

August 07, 2024



QSM 6.0 Requirement	Supplemental Information: 08/07/2024
<p>Table B-22 QC Check Evaluation of Relative Error (%RE) or Relative Standard Error (%RSE)</p>	<p>If no criteria are listed, the laboratory shall develop its own criteria; however, the maximum allowable %RE at or near the mid-range and low level of the calibration shall be 20% and 35%, respectively.</p> <p>Changed from ... %RE at or near the mid-range and low level of the calibration shall be 20% and 50%, respectively.</p>
<p>Table B-25 QC Check Internal Standard (IS)</p>	<p>The IS requirement identified in Table B-25 may be omitted when IS are not used.</p>
<p>Table B-30 QC Check Surrogate Spike</p>	<p>A surrogate fortification standard shall be added prior to any processing (e.g. prior to drying/grinding or extraction).</p> <p>Changed from a solid surrogate fortification standard.</p>