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STANDARDS & GUIDANCE BRIEF · INTERNATIONAL · INTERNATIONAL GUIDE

GUM · Guide 98-3

Evaluation of measurement data — Guide to the expression of uncertainty in measurement (JCGM 100, ISO/IEC Guide 98-3)

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ISSUED BY	Joint Committee for Guides in Metrology (JCGM); published by ISO as ISO/IEC Guide 98-3	PREPARED BY	Conner Davidson
EDITION	JCGM 100:2008, amended in 2026	STATUS CHECKED	October 24, 2026
INDUSTRIES	Laboratories & Calibration	ONLINE	qesisbest.com/standard-gum.html

CURRENT EDITION The 2008 text remains the reference, with a 2026 amendment; supplements cover Monte Carlo propagation and multivariate models.

What It Covers

The internationally agreed method for evaluating and expressing uncertainty in measurement, so results from different laboratories can be compared.

Who It Applies To

Calibration and testing laboratories, and anyone stating a measurement result with its uncertainty.

Key Requirements

- A measurement model relating the result to each input quantity.
- Type A (statistical) and Type B (other information) evaluations of standard uncertainty.
- Combination of standard uncertainties, including correlations, into a combined standard uncertainty.
- An expanded uncertainty with its coverage factor, reported with the result.

What an Auditor Asks to See

- The uncertainty budget for a reported result, and where each contributor came from.

Where Systems Fall Short

- Budgets that list contributors but ignore correlations.
- Coverage factors applied without considering degrees of freedom.

How QES helps. Uncertainty budgets reviewed term by term, and rebuilt where the model is wrong. See the gap assessment: qesisbest.com/services.html#gap-assessment · +1 (401) 246-3204 · mweeden@qesisbest.com

Sources, checked October 24, 2026. BIPM — Joint Committee for Guides in Metrology — www.bipm.org.

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