



## Uncertainty Analysis Software Selection Guide

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Integrated Sciences Group offers a variety of software for calculating measurement uncertainty. The quick overview table below provides a comparison of the main features and capabilities of our uncertainty calculation software products and freeware. We hope this facilitates your selection process. For additional assistance, please contact us at 1-661-872-1683 or e-mail us at [isg@isgmax.com](mailto:isg@isgmax.com).

A ✓ in the cell indicates that the particular capability or feature is available. Alternatively, a blank cell indicates that the capability or feature is not available. The + or - symbols are included to reflect the relative capabilities and features of each product. Comments and footnotes are included to clarify significant differences and to provide necessary details.

### Summary of Main Features and Capabilities

Features and Capabilities	Uncertainty Sidekick 1.0	Uncertainty Sidekick Pro 1.0	Uncertainty Analyzer 3.0
Single-User Price (USD)	Free via download	\$295 (Software CD & User Manual)	\$995 (Software CD & User Manual)
Analysis of Direct Measurements	✓	✓	✓
Analysis of Multivariate Measurements		✓	✓
Analysis of Measurement Systems <sup>1</sup>			✓
Uncertainty Budget Table	✓	✓	✓
Maximum Number of Error Sources Allowed	15	40	Over 1,000
Type A Uncertainty Analysis Options	Sampled Values or Sampled Mean Values	Sampled Values or Sampled Mean Values	Sampled Values, Sampled Mean Values, Sampled Cells, or Mixed <sup>2</sup>
Advanced Statistical Analysis of Sampled Data			Outlier Identification & Removal, Normality Testing, Sample Size Evaluation



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Features and Capabilities	Uncertainty Sidekick 1.0	Uncertainty Sidekick Pro 1.0	Uncertainty Analyzer 3.0
Type B Uncertainty Analysis Options	One-sided Limits, Two-sided Symmetric or Asymmetric Limits, Expanded Uncertainty	One-sided Limits, Two-sided Symmetric or Asymmetric Limits, Expanded Uncertainty	One-sided Limits, Two-sided Symmetric or Asymmetric Limits, Expanded Uncertainty
Type B Degrees of Freedom Calculation	✓	✓	✓
Establishment of Tolerance Limits from Equipment Specifications	Specifications Combined Linearly or in Root-Sum-Square	Specifications Combined Linearly or in Root-Sum-Square	Specifications Combined Linearly, in Root-Sum-Square or via SpecMaster <sup>3</sup>
Available Error Distributions	Normal, Uniform and Student's t	Normal, Uniform and Student's t	Normal, Lognormal Exponential, Quadratic Cosine, Uniform Triangular, U-Shaped and Student's t
Plots and Charts	Error Distributions and Pareto Diagrams	Error Distributions and Pareto Diagrams	Error Distributions, Pareto Diagrams and Histograms
Uncertainty Growth Projection			✓
Bayesian Risk Analysis	✓	✓	✓+
Measurement Units Database <sup>4</sup>	✓	✓	✓
Measurement Equipment Database <sup>5</sup>		✓	✓+
Entry and Display of Supporting Information	Notes Screens	Notes Screens	Notes & Analysis Description Screens
Analysis Reports <sup>6</sup>	✓	✓	✓+
Report Customization <sup>7</sup>	✓	✓	✓
Export Options	Analysis Reports, Charts & Plots, Notes	Analysis Reports, Charts & Plots, Notes	Analysis Reports, Analysis Descriptions, Charts & Plots, Notes



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<b>Features and Capabilities</b>	<b>Uncertainty Sidekick 1.0</b>	<b>Uncertainty Sidekick Pro 1.0</b>	<b>UncertaintyAnalyzer 3.0</b>
Export Formats	Windows Clipboard	Windows Clipboard, Rich Text & HTML File Formats	Windows Clipboard, Rich Text & HTML File Formats

1. UncertaintyAnalyzer contains a built-in graphical user-interface for designing and analyzing system modules and computing uncertainty propagation from system input through system output.
2. The mixed option allows for the use of a mean value computed from sample values combined with a user specified standard deviation and sample size obtained from a prior sample of data that characterizes the repeatability uncertainty of a measurement process.
3. Built-in SpecMaster tool for computing tolerance limits from complex equipment specifications using VB Script programming language.
4. Database containing measurement area and units consistent with NIST Special Publication 811. Editable via user interface.
5. Relational database for storing and retrieving instrument identification information, tolerancing data, and other operating and manufacturer specifications.
6. A variety of reporting levels are available including summary reports and "drill-down" reports for complete communication of analysis results.
7. Options for changing report fonts, selecting which reports to print, including or excluding notes or comments, and including or excluding charts, plots and other graphics (if available). All reports can also be previewed prior to printing.