Laboratory Name:
This file contains the inventory and template form for software quality assuranc
FileName: Macintosh HD:private:var:folders:37:71m6ffz93

Version	Date	Initials
1.0	1-Apr-09	GH
2	6/25/10	GH
2.1	6/25/10	TS

Modifications
Basic Software Inventory - original file
Sheets added for Revisions, Computer Inventory, COTS, and Assessment Form A; Codes removed from Software Inventory; Measurement Parameters added to Inventory
Technical Assessment form modified and inserted as Form A.

visions

Laboratory Computer Inventory

Computer	Model	Service T	ID Tag No.	Location

Operating System	Processor	Installed	Status	Maintenance

Network

Commercial-off-the-Shelf (COTS) Software Used in the Laboratory

Software Program	Source	Date Implemented

	Laboratory:	
File Name	**Description of Purpose**	
Uncertainty-Template-Apr2008.xls		
Control Chart Template.xls		
PMAP		
3-1Weigh_16Apr08.xls		
air91co24-2.xls		
Lab Wizard 1.0		
Masscode.DOS		
IR5672-Equations-v1-00-1Mar05.xls		
GravCal_16Apr08-2.xls		

Software Inventory and Status

Used for Procedure	Authorized Users	Program Source
Laboratory Operations		
		NIST
		NIST
Mass III		
Wheelload Weigher/Weight Carts		
Mass II		
		NIST
		NIST
Mass I		
		NIST
		NIST
		NIST
Gravimetric Volume I		
		NIST
Volume Transfer II		
Volume Transfer LPG/SVP		
Length		
Temperature		

Time and Frequency		
Other Measurement Parameter - TBD		

Validation File Name/Location

Not validated by NIST. Local modifications must be validated too.

Not validated by NIST.

Not validated by NIST.
Validation Tab/Worksheet in the File. Form A needed.

Compiled/provided by NIST. Data sets used on site.
Compiled/provided by NIST. Data sets used on site.

Not validated by NIST.

Technical Assessment

This form is completed for each software file used in the laboratory. The form may be added as a
file/workbook or may be maintained in a separate electronic/paper file/location in the laboratory.

Codes	Assessment
A. Software Inspection	Spreadsheet is clear and makes sense
	There are instructions for use
	Instructions and data input appear on the visible portion of the first wo
	Data-entry fields are labeled and color coded (it is recommended to a
	The Standard Operating Procedure (SOP) used is clearly specified
	The number of digits to be rounded to is specified
	The user is warned/notified whenever data-entry fields are left blank
	Data-entry fields are "blank" when opened, preventing loss of old data
	old data is not used with the current calculations
	The software opens at the right location within the file
	Unused fields/cells are locked
	Rows/columns that the operator need not see are hidden
	Unused sheets are removed
	Worksheets are named appropriately
B. Mathematical Specification	The correct SOP is used
	The formulae and methods chosen from that SOP are specified
	Sources and references for formulae are specified
	The chosen SOP, its methods, and its formulae, are appropriate to the precision/uncertainty
C. Code review	The formulae in the fields exactly match the SOP
	Repeated calculations appropriately reference the correct cells
	Calculations, when tested using standard data or reference test data,
	Rounding is done at the appropriate locations in the file
D. Numerical Stability	Calculations are stable as determined by an evaluation that uses large differences
	Fields, therefore their content, are categorized as "Number" and not "(appropriate, and vice versa
	"Number" cells are locked to a limited number of decimal places; this I the values being used
E. Component Testing	Each macro used is functional
	Each command/button is functional
	Combinations of interdependent macros are functional
	Plotted graphs are accurate
	Worksheets/reports print properly, if needed to
	Conditional (color and non-color) formatting is functional
merical erence	Look-up tables and lists match the latest calibration report.
	Uncertainties match the latest Scope
	Values that reference another workbook or spreadsheet are dated

F. Nu Refe		When a master list's date is updated, the file references (A) an old val value, (C) displays zero or (D) an error message, as desired by the us
G. Embedded Data Evaluation		Embedded data (conversion factors, reference values, etc) is correct
		The evaluation of the embedded data is dated and documented
H. Back-to-Back Testing		Newer spreadsheets and older spreadsheets agree down to the level calculations; this evaluation is dated and documented
I. Analysis With Out Computer Assistance		Hand calculations agree with those generated by the spreadsheet, or differences are significantly smaller than the reported uncertainty
J. Security		Equation and calculation cells are protected against inadvertent editing
		Cells are locked in place; they cannot be moved/dragged
		Confidentiality of passwords is appropriate
		Files are backed up automatically
		Additional back-up is available at alternate facilities
		Files on network drives cannot be accidentally deleted

a tab/worsheet to a

	Pass/Fail	Evidence
rksheet void red and green)		
and ensuring that		
level of		
show appropriate		
numbers and small		
General" when		
imit is appropriate to		

ue, (B) a default ser		
of intermediate		
if they disagree, the		
g		

Cells P69 th

Pass
Fail
N/A

hrough P72 are necessary for the drop-down menu in cells J8 through J60