

Using Isotech milliK and I-Cal Easy

- Part Two
- Results and Certificates
- Start the Certificate Builder



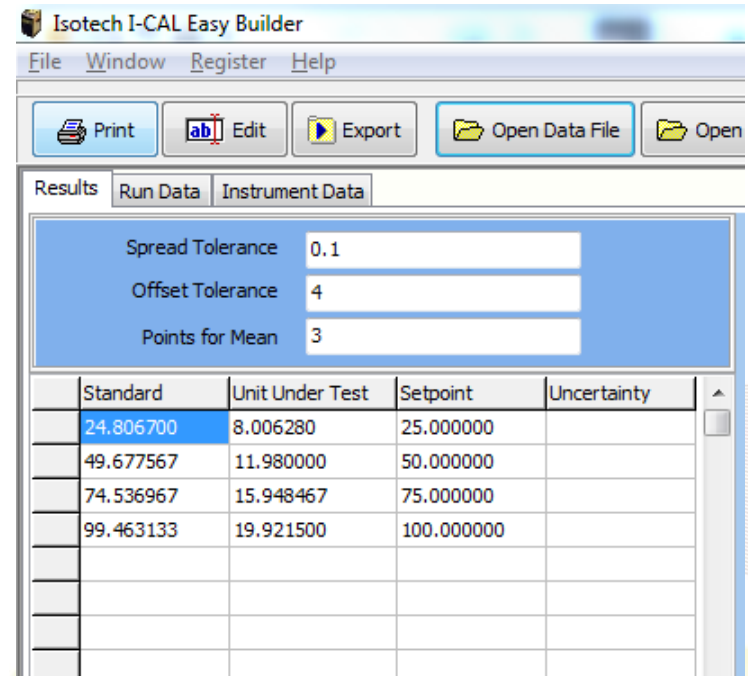
Press START – Open Data File and Select CHAN 3

- The results are stored on for each channel
- We open 4-Nov-mK-3-3milliK CHAN 3
 - (Channel 3 of the milliK – Current Input)

HelpHTML	02/06/2015 09:10	File folder	
PDFHandbooks	02/06/2015 09:10	File folder	
Sample Run Data	02/06/2015 09:10	File folder	
Sample Templates	02/06/2015 09:10	File folder	
4-Nov-mK-1-1milliK CHAN 1 COM1-	04/11/2015 14:33	I-Cal Easy Result F...	40 KB
4-Nov-mK-2-2milliK CHAN 2 COM1-	04/11/2015 14:33	I-Cal Easy Result F...	40 KB
4-Nov-mK-3-3milliK CHAN 3 COM1-	04/11/2015 14:33	I-Cal Easy Result F...	40 KB
4-Nov-mK-4-4 ABlock Setpoint-	04/11/2015 14:33	I-Cal Easy Result F...	40 KB
4-Nov-mK-5-5 ABlock Proc Var-	04/11/2015 14:33	I-Cal Easy Result F...	40 KB
4-Nov-mK-6-6 ABlock Chan 1-	04/11/2015 14:33	I-Cal Easy Result F...	40 KB
4-Nov-mK-7-7 ABlock Chan 2-	04/11/2015 14:33	I-Cal Easy Result F...	40 KB
4-Nov-mK-8-8 ABlock Chan 3-	04/11/2015 14:33	I-Cal Easy Result F...	40 KB

Results Summary

- Here we see the standard value (milliK Channel 1) and the Unit Under Test (The transmitter on Channel 3)
- We also see the set point, the tolerances and number of points for the mean

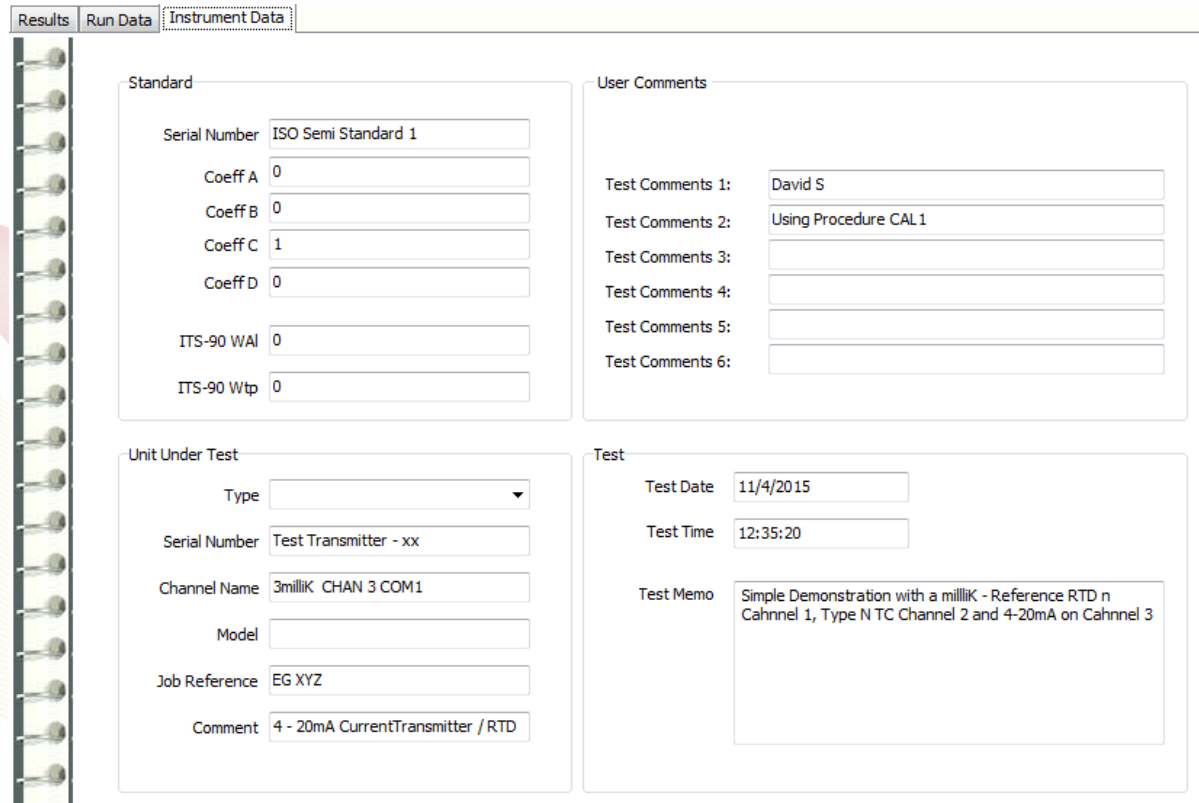


The screenshot shows the 'Isotech I-CAL Easy Builder' application window. The 'Results' tab is active, displaying a table of test data. Above the table, there are input fields for 'Spread Tolerance' (0.1), 'Offset Tolerance' (4), and 'Points for Mean' (3). The table has four columns: 'Standard', 'Unit Under Test', 'Setpoint', and 'Uncertainty'. The first row is highlighted in blue.

Standard	Unit Under Test	Setpoint	Uncertainty
24.806700	8.006280	25.000000	
49.677567	11.980000	50.000000	
74.536967	15.948467	75.000000	
99.463133	19.921500	100.000000	

Reviewing the Test

- Instrument Data has further information – we can select any of it to appear on the certificate



Results Run Data Instrument Data

Standard

Serial Number

Coeff A

Coeff B

Coeff C

Coeff D

ITS-90 WAI

ITS-90 Wtp

User Comments

Test Comments 1:

Test Comments 2:

Test Comments 3:

Test Comments 4:

Test Comments 5:

Test Comments 6:

Unit Under Test

Type

Serial Number

Channel Name

Model

Job Reference

Comment

Test

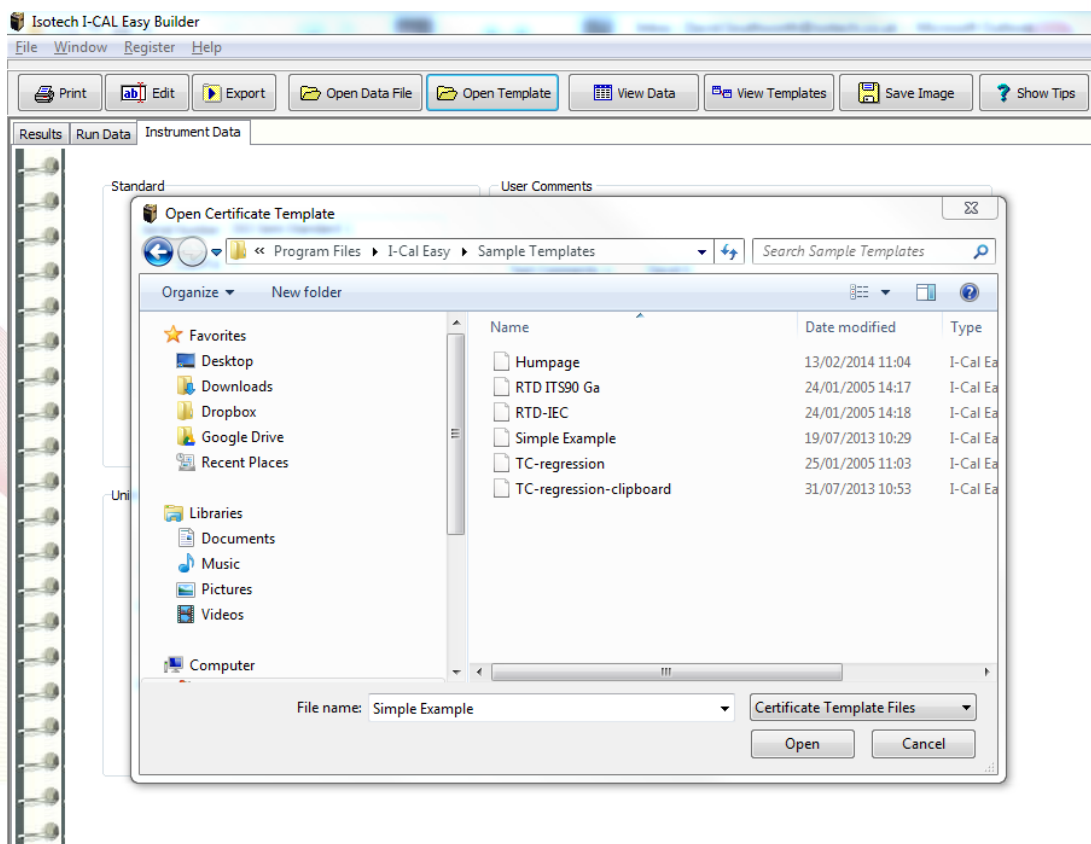
Test Date

Test Time

Test Memo

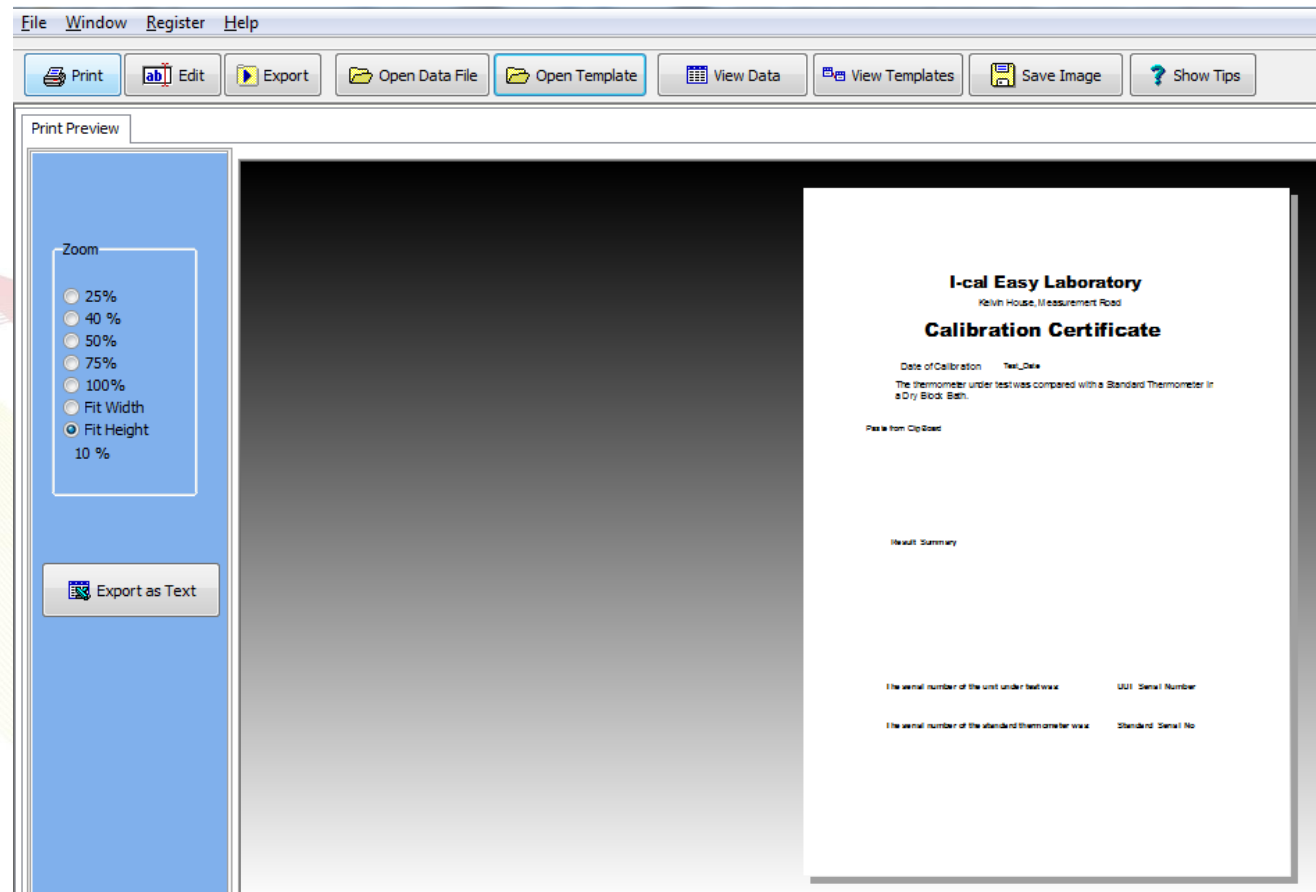
Printing a Certificate

- Press Open Template
- Here "Simple Example"



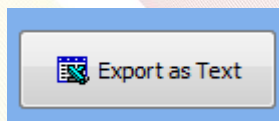
Printing a Certificate

- Press Export to move the data to the template



Printing a Certificate

- The template can be edited to meet individual requirements - and any of the data entered can be added - along with static test and logos
- You can export data from the certificate to Excel use this button



I-cal Easy Laboratory
Kelvin House, Measurement Road

Calibration Certificate

Date of Calibration: 11/4/2015
The thermometer under test was compared with a Standard Thermometer in a Dry Block Bath.

Standard	Unit Under Test	Setpoint
24301700	8.000000	25.000000
43071707	11.000000	50.000000
74331007	15.000000	75.000000
93402132	18.000000	100.000000

The serial number of the unit under test was: Test Transducer - xx

The serial number of the standard thermometer was: ISO Semi Standard 1

Other Sensor Types

- Here is the Type N Thermocouple on Channel 2

Results | Run Data | Instrument Data

Spread Tolerance: 0.1
 Offset Tolerance: 4
 Points for Mean: 3

Calculation Type

Comparison

Standard	Unit Under Test	Setpoint	Uncertainty
24.806700	24.828367	25.000000	
49.677567	49.386633	50.000000	
74.536967	74.042867	75.000000	
99.463133	98.861833	100.000000	

Setpoint	Standard	Unit Under Test	Error	Correction	Uncertainty
25.000000	24.806700	24.828367	0.0217	-0.0217	
50.000000	49.677567	49.386633	-0.2909	0.2909	
75.000000	74.536967	74.042867	-0.4941	0.4941	
100.000000	99.463133	98.861833	-0.6013	0.6013	

Clear Swap Calculate

Other Sensor Types

- I-Cal Easy can produce tables for SPRTs, PRTs and Thermocouples – it can also calculate coefficients for IEC 60751, ITS-90 and thermocouple correction curves

📊
Calculation Type

Callendar Van Dusen

A

B

C

R0

Nom 0 TMean =

Nom 0 RMean =

Table

📊
 Create Table

	Standard	Unit Under Test
Nom 0 °C (i)		
Nom 0 °C (ii)		
Nom 0 °C (iii)		
Minus Value		
Plus (i)		
Plus (ii)		

Length:

The Callendar Van Dusen Equation

$$R_0(1 + AT + BT^2 - 100CT^3 + CT^4)$$

where: