DOCUMENT

POTTS-Medusa-Series

Isotech

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POTTS Ease of Use

Using the metal clad slim cells couldn't be easier!

Long term stability

For the past seven years a set of metal clad slim cells have been part of our UKAS Secondary laboratory. An automated system puts the cells onto their melt plateau each day, every day of the year.

Complete melts and freezes are recorded each two years as part of our quality assurance program with the following results:

In	No change
Sn	No change
Zn	No change
Al	No change

International Intercomparison

A set of metal clad slim cells from mercury through aluminium were tested at PTB by comparison to PTB's reference cells. All cells were within PTB's uncertainties.

Their results are summarised

Slim Cells	ΔT	Uncertainties
Hg 137	0	±1.5mK
In 125	-1.4	±2mK
Sn 132	+1.4	±2mK
Zn 64	+0.3	±3.5mK
Al 160	+1	±5mK

An Example with a Medusa

Set the Medusa to a temperature 1°C above the cell's melt and wait!

Once the cell starts to melt you can use it all day to calibrate.

As you go home lower the Medusa temperature by 5°C and the cell will refreeze overnight ready for use again the next day.

Or like us, automate the process using a wall timer, to have cells melting all day every day.

With cells, apparatus and SPRT's you still need fixed resistors and an instrument. If you chose the standard recommended UKAS uncertainties you need a microK 250, two Standard Resistors with UKAS certificates and a temperature controlled environment to put them in.

If you chose the premier UKAS route then you need a microK 70 bridge as well as the resistors and temperature controlled environment.