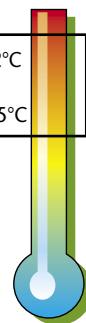


# Fixed-Point Cells

## Sealed & Open

1084.62°C  
to  
156.5985°C



PRIMARY LAB

### Sealed Cells

First developed during the 1970's by Henry Sostmann these cells meet all the requirements of science and industry for Fixed Point Realizations of ITS-90.

The cells now offered by Isotech have been increased in purity and length to conform to the requirements of optimal realizations except that we have sealed in 1 atmosphere of 6N pure argon at the freeze temperature for you. Sealed optimal realizations of ITS-90 are made from metal exceeding 6N5 purity and have a useable depth below the metal surface of more than 200mm. They come complete with Inconel basket, a carry case and the necessary heat shunts and reflectors to enable them to fit into our apparatus.

Sealed cells must be hand carried. UKAS or NIST certification is also available for sealed cells.

### Features of Isotech Optimal Realizations (sealed or open cells)

	Purity <sup>1</sup>	Typical Depression <sup>2</sup> from ITS-90 (mK)	Well depth below <sup>3</sup> metal surface (mm)	Variation with Depth (mK/metre)	Variation with Pressure (mK/bar)
Mercury	7N	0.02	200	7.1	5.4
TP. H2O	n/a	0.04	290	-0.73	-7.5
Ga	8N	0.01	260	-1.2	-2.0
In	6N5	0.25	200	3.3	4.9
Sn	6N5	0.15	200	2.2	3.3
Zn	6N5	0.25	200	2.7	4.3
Al	6N5	0.35	200	1.6	7.0
Ag	6N5	0.55	200	5.4	6.0
Cu	6N5	1.0	200	2.6	3.3

<sup>1</sup> Analysis by emission spectrophotograph. Results in ppm wt (6N5=0.5ppm)

<sup>2</sup> Assuming the law of Dilute Solutions (ref CCT/96-8. P6)

<sup>3</sup> Minimum values

*Fact: Isotech is the only UKAS Laboratory accredited to certify Fixed Point Cells*

### Key Features

- Cells of International Acceptance
- 99.99995% Purity
- ITS-90 Fixed Points
- Sealed or Open Models



### SPECIFICATIONS

<b>Diameter</b>	Typically 50mm
<b>Length (sealed cell)</b>	Typically 275mm excluding sealing tip
<b>Length (open cell)</b>	Indium, Tin, Lead, Zinc: 520mm to underneath of flange Antimony, Aluminum, Silver, Copper: 610mm to underneath of flange
<b>Thermometer Immersion</b>	Below metal surface 200mm <i>Clients often confuse the immersion in the cell with the total immersion over which length the temperature gradient should be less than 1°C if the apparatus is operated properly.</i>
<b>Weight</b>	5.5 lbs (2.5kg) or less, depending on metal

*Note: All Cells are intended for use in, and are dimensionally compatible, with the appropriate Isotech furnaces.*

### HOW TO ORDER

ITL-M-17401	Gallium	29.7646°C
ITL-M-17668	Indium	156.5985°C
ITL-M-17669	Tin	231.928°C
ITL-M-17670	Lead (secondary)	327.462°C
ITL-M-17671	Zinc	419.527°C
ITL-M-18204	Antimony (secondary)	630.63°C
ITL-M-17672	Aluminum	660.323°C
ITL-M-17673	Silver	961.78°C
ITL-M-17674	Copper	1084.62°C

Quote model no and then add "O" for Open Cell.  
Sealed Cells will be supplied if no additional instructions are given.  
Other metals to special order.