Ice Mantle Maker
Water Triple Point

Introduction

Are you fed up with cold wet hands, and hours of frustration when you produce an ice mantle in your Triple Point Cell?

Change your life and try the Isotech Ice Mantle Maker.

We developed it, like so many of our products, for our own use in our UKAS facility. It is so easy that we actually want to make more mantles. The days of dreading making ice mantles are gone with the Ice Mantle Maker.

It works by using a specially designed anti-gravity heat-pipe. The heat-pipe exits the cell and exchanges the heat/cool in a small container filled with solid carbon dioxide or preferably liquid nitrogen.

Because of the low temperature gradient along the heat-pipe the ice mantle is formed close to 0°C, and so beautiful strain free mantles are formed.

The Mantle Maker works equally well when you wish to increase the thickness of ice at the bottom of the cell. By keeping only a cc of alcohol in the cell the heat transfer is focused around the bottom of the cell.

Background

In 1969 John Evans of N.B.S. America described a method of heat removal and ice mantle growth in a water triple point cell. His materials, liquids, etc. were adequate at the time and the idea has been considered as a novelty since.

Now, Isotech have brought the liquids and technology right up to date to effectively solve the problem of trouble free and strain free fast ice mantle manufacture.

Ice Bridge Prevention Collar

In developing the heat pipe Ice Mantle Maker we worried that an ice bridge can form across the top of the cell.

We therefore developed a clever collar that sits around the cell and prevents ice formation at the water/vapour interface.

We include this free with the Mantle Maker provided you inform us of the cell diameter with the order.

Weight	250g
Typical time to create a mantle	20 to 30 minutes using a Jarrett-Isotech A11 Water Triple Point Cell.*

** Longer or shorter times for larger or smaller cells.*

Options

Additional Ice Bridge Prevention Collar

How to order

452 Ice Mantle Maker and one ice bridge prevention collar

Please specify

A) Cell Type or
B) Outside diameter of Water Triple Point Cell (mm)
C) Depth from shoulder of Cell to water level (mm)