

The logo for Apex Instruments Co. features a stylized 'A' symbol on the left, followed by the text 'APEX INSTRUMENTS CO.' in a blue, sans-serif font. The text is enclosed in a thin blue border.

**APEX  
INSTRUMENTS CO.**

**PTC-1000C**



This fully computer controlled automatic and versatile freeze-thaw device is capable of producing the most precise, yet flexible temperature control programme of any system available in the cryopreservation field today. Controlled rate freezer provides compact mechanically refrigerated bath for electronically programmed cooling of biological specimens prior to storage or programmed thawing prior to use. The specimen chamber is refrigerated or heated in response to a previously chosen programme that allows any rate of cooling protocol of desire with independently chosen facility to alter, add or halt programmes as needed ranging from 0.01°C/min to 20°C/min for very slow and fast programming. Built in safeguards protect programmes from inadvertent erasure and keep in memory. For every cryopreservation application PTC-1000C is the instrument of choice. Whatever your temperature needs PTC-1000C has the answer.

## TECHNICAL SPECIFICATION

Ours is a fully computerised auto programmable Bio-freezer. Any freezing protocol of desire with present programming can be achieved independently. This leads to a vast choice of programmes, not only limited to specific number of programmes. Even the steps of freezing programmes can be liberally used, not confined to any specific number. An UPS system of 2 K.V.A. (offline) compatibly can be used with the equipment, helps the system to store the data in memory, even when the power goes off in course of freezing operation at least for 30 minutes uninterruptedly even without electrical power.

Our system provides vertical sample holder facilities. System itself helps auto seeding by super cooling system method by bursting out LN<sub>2</sub> gate, or this has the facilities to induce the sample holding straws with super cooled metal stick manually. Controlled rate of cooling can be achieved precisely with PID controlled electronic device with an efficient and user's friendly software. Both freezing and thawing can be done with the rate of 0.01°C to 20°C.

Special feature of the instrument is low consumption of liquid nitrogen. And this is done due to auto tuning of the instrument.

This precision instrument is designed for the needs of active fertility and reproductive research laboratories who need high performance at Lower Cost.

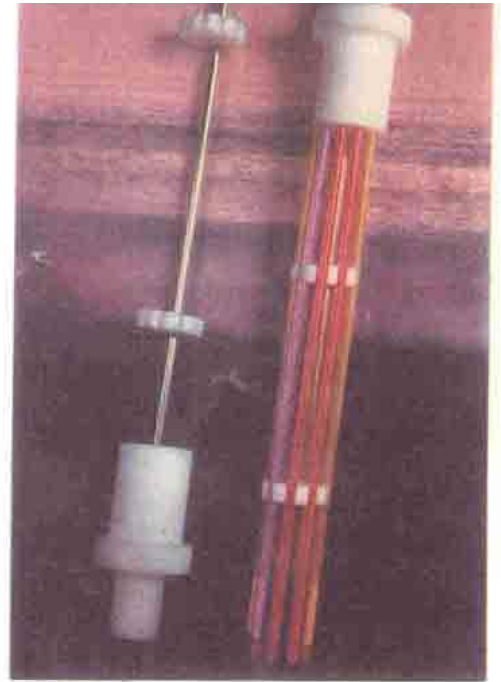
Proven in fertility and research laboratories in India. Hand-free automation during freezing operation and audio and visual alarming of protocol termination lets the user indulge in other laboratory work being away from the system, yet feel confident of its reliability.

## TECHNICAL FEATURES

- Range : -120°C to 40°C
- Type of sensor : Solid-state / thermocouple
- Accuracy : ± 0.5°C
- Cold Junction Compensation : In built
- Working Volume : 4 lits.
- Freezer Material : Pure Stainless Steel
- Overall Freezer Dimension : 300 x 300 x 500 mm  
(LxBxH)
- ❖ Electrical :
- Input : 230V AC ± 10% AC Single Phase
- Line Current Frequency : 50 Hz.

## SAMPLE HOLDERS

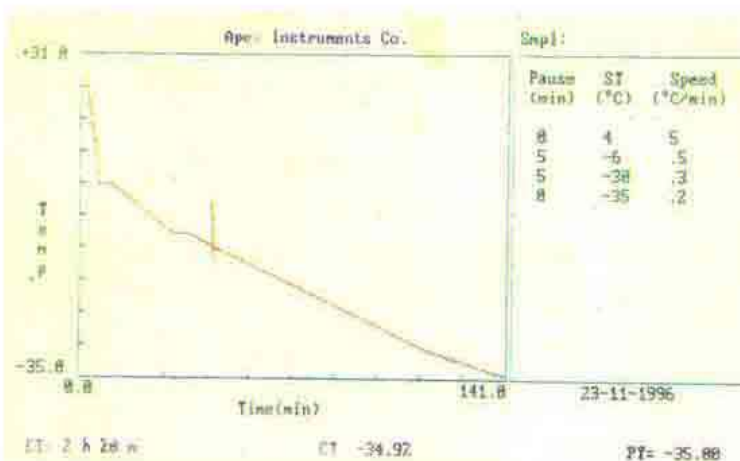
Teflon sample holder for both 0.25 and 0.50 C.C straws, cryovials and canes designed for cryogenic storage of biological substances in mechanical freezer in vapour phase of liquid nitrogen



## POWERFUL SOFTWARE

PTC-1000C also features easy to use upgradable windows 95/98 based software to meet your new requirement. Following Facilities are provided by this versatile Software.

Pause, Set point, Speed, Sample Name, Time required to complete the freezing protocol, Auto Tuning Facility, Current Temperature, Program Temperature and Difference between Current Temp. & Program Temp.. Both the actual and programme temp. operational graph can be seen on the computer screen. Critical temp. can be detected with the highly sensitive thermocouple sensor on the screen with total graphics chart of freezing protocol, color coded tracks and its plotting. Print out can be taken of the graphics and stored data for future reference. All the data can be stored in ASCII text file and can be transferred to any commercially available graphics packages.



## **STANDARD FEATURES**

- Very accurate temperature control
- Temperature range from -120°C to 40°C
- Very compact and easy to place
- Large cooling capacity
- Suitable for ampoules, straws and bars
- Easily serviceable faithful in operation

## **SOME OF TYPICAL APPLICATION IN CRYOPRESERVATION**

- Fish husbandry
- Cultured plant cells, and conservation of germplasm
- Viable leukemia cells for cancer research
- Preservation of solid tumor cells
- Platelets as a bank for transfusion into patients
- Spermatozoa for animal husbandry
- Embryos for maintenance of genetically pure stock
- Tissue culture cells virology and cell pathology
- Tissue for clinical use, i.e. skin and cornea
- Lymphocytes for immunology
- Bone marrow transplantation

**For technical support and more information  
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