LP ITALIANA SPA
Via C. Reale, 15/4 - 20157 Milano - ITALY
Tel. +39 02 3933061
Fax +39 02 39313484
www.lpitaliana.com
info@lpitaliana.com

Capitale Sociale € 309.600,00
R.E.A. MI 882798
Reg. Imp. MI 161285/3927/35
C.F. e P.I. 01794050151
c/c postale 19643204

TECHNICAL SHEET

C R I O P L A S T

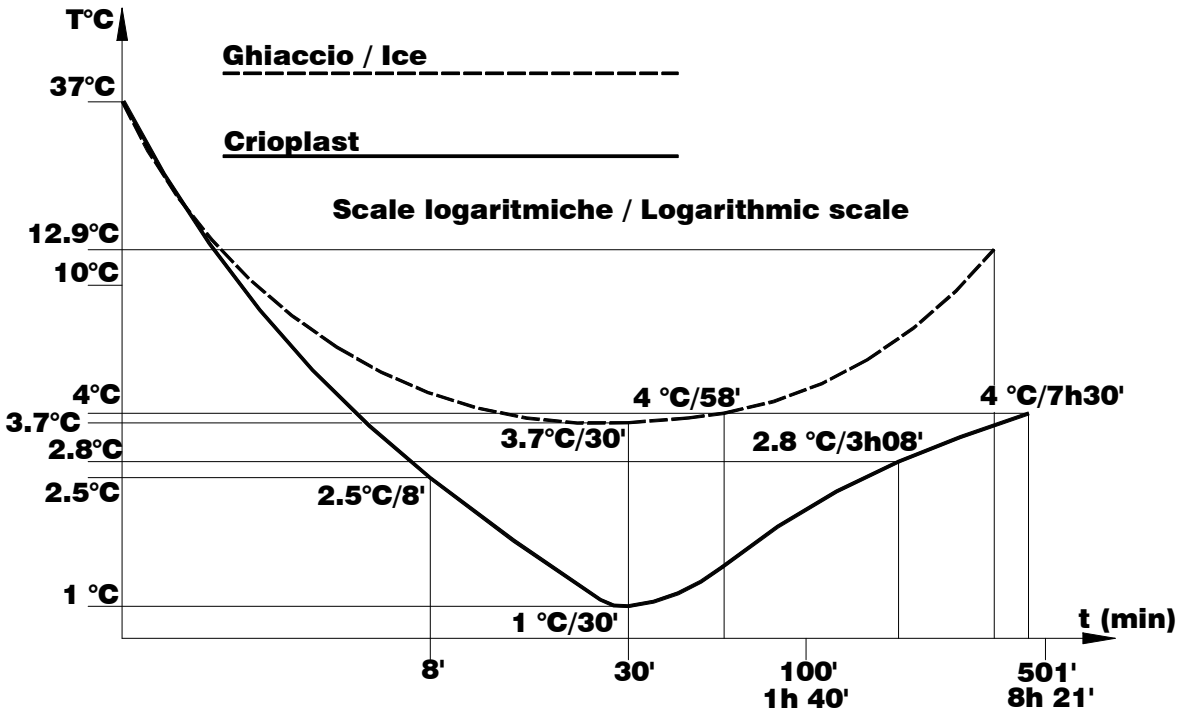
Code **100015**

CRIOPLAST is a container designed for the transport of biological samples that need to be kept at low temperatures for a certain time period.
It consists of PS As (anti-choc polystyrene) shells containing a particular eutectic liquid.

Specific tests have been made for their application in blood gas analysis, since during this test the blood should not exceed given temperatures, otherwise the gas contained is volatilized.

LP CRIOPLAST is normally used to carry tubes with whole blood for short periods of time and distances. The temperature trend is shown in the following chart comparing samples of the same blood kept in a CRIOPLAST and in ice.
The following parameters have been maintained:

1. CRIOPLAST without styro-foam box, containing a tube with blood
2. Ice containing a tube with blood: ~ 5 dm^3
3. Starting Temperature of the blood sample: +37°C
4. Room Temperature (~ constant): +23°C
5. CRIOPLAST refrigeration: 12 hours at -12°C

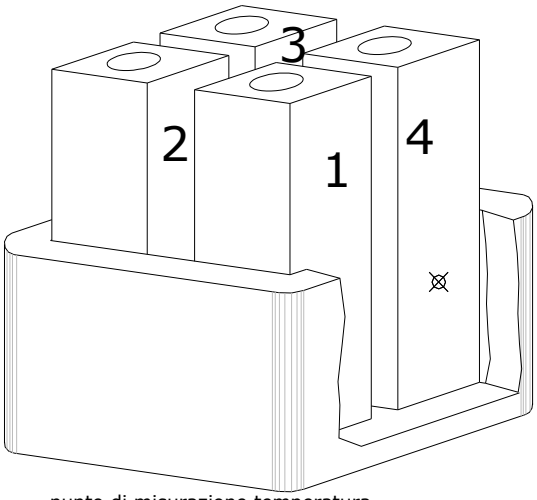


The use of very low temperatures allows to keep the sample temperature for longer periods of time. The use of additional insulating containers (ex.: styro-foam boxes) further increases the CRIOPLAST's performance.

LP ITALIANA SPA supplies specific containers for four CRIOPLAST, designed to optimize the storage at low temperatures.

Please see the following charts:
Test conditions:

1. Refrigerating Temperature of CRIOPLAST (without poly-foam box): -25°C
2. CRIOPLAST refrigeration time: 24 hours
3. Room temperature during defrosting: ±21°C
4. Defrosting time (observation): 8 hours
5. Defrosting conditions: Four CRIOPLAST inside a styro-foam container
6. Temperature measurement point: ~ at 1/3 of the height from the bottom (samples position)



punto di misurazione temperatura
temperature measurement point

Left:
defrosting conditions
(the top of the box is not shown)

We point out that the discrepancy between the temperature trend of the blood sample (graph. Pag. 1) and of CRIOPLAST is justified by the space between the inside of the CRIOPLAST and the tube inside.

Changing the transmission conditions of the frigories "CRIOPLAST > tube" from convection to conduction it is possible to lower the samples' temperature considerably, but this is not the aim of the refrigeration for an hemogas analysis. During our testing we followed standard operating conditions.

Below: average temperature of four defrosted CRIOPLAST inside a LP styro-foam box.