

# FreezeCell程序降温盒 使用说明书

## 一、程序降温盒概况

程序降温盒运用于各种细胞类型，包括干细胞，原代细胞、细胞系和酵母等。程序降温盒不需要任何液体及添加剂的辅助，只需放入到超低温冰箱，就能确保降温盒中样品的降温速率为每分钟-1℃是一个非常理想的细胞保存组合。产品采用径向对称设计配合复合泡沫和贵重合金，具有零添加零排放的特点，并且不需要更换任何部件就能永久性使用真正响应到绿色环保的号召。

产品使用便捷，只需插入冷冻管，然后再放在-80℃的环境中即可。不仅能大大提高使用者的工作效率及保存细胞的存活率，而且对人体，环境，样本更为安全，省心。

## 二、程序降温盒特点

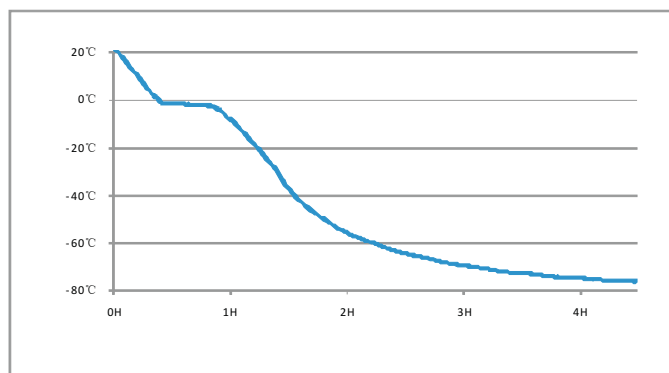
- 1、无需添加任何液体，也不需要预冷，直接将样品放入程序降温盒，然后放入-80℃低温环境即可。
- 2、随时都很轻松地打开盖子，可以直接用手将盒子从-80℃低温冰箱中拿出，而不会冻伤手指。
- 3、转移样品方便，都有编号对应。
- 4、降温速率一致性好，每次实验降温速率一致，所有孔位降温速率一样。
- 5、无维护成本，无需更换任何东西，一次购买，长期使用。
- 6、重复使用间隔时间短，只需回温5分钟。
- 7、对低温冰箱内的周围温度影响小，不需要特定的冰冻空间。

## 三、程序降温盒使用方法

直接将需要冷冻的样品放入程序降温盒的孔位中，盖好盖子后将程序降温盒放在一个-80℃的干净冷冻设备环境中至少3小时，期间不能打开。降温完成后便可取出样品转移到液氮中。如果需要连续使用，则在常温环境将产品上下盖打开，恢复到常温即可再次使用。

## 四、程序降温盒技术参数

| 型号     | 规格                | 重量   | 备注   |
|--------|-------------------|------|--|
| FZC-01 | S108*100mm(s:对变宽) | 120g | 可放1ml/2ml冷冻管或离心管<br>(12- $\varnothing$ 13) |
| FZC-02 | 117*117*100mm     | 160g |  |



FreezeCell 程序降温盒降温示意图

# FreezeCell Instructions for use

## Overview

The FreezeCell can be used in a variety of cell types, including stem cells, primary cells, cell lines and yeast. The cooling box does not require any liquid or additive, all you need is placed the cooling box into the ultra-low temperature refrigerator, then it can ensure that the box's has the cooling rate of  $-1^{\circ}\text{C}$  per minute. It is a very good device for all types' cell preservation. The product uses a symmetrical design with a combination of foam and precious alloys, with no additive and no emissions characteristics. It is an environmental friendly product. It does not need to replace any parts, and can be permanently used.

The cooling box is easy to use, just insert the frozen tube, placed the unit in  $-80^{\circ}\text{C}$  freeze environment. It can greatly improve the handling efficiency and has a good survival rate for the cells after thawing. The sample is safer and worry free.

## Product Features

1, Does not need to add any liquid, do not need pre-cooling, the sample directly put into the cooling box, and then keep the whole box store into the  $-80^{\circ}\text{C}$  low temperature freeze environment.

2, Easily open the lid at any time, you can directly hand held the box from the  $-80^{\circ}\text{C}$  refrigerator without frostbite your fingers.

3, Transfer the sample is conveniently, you can remove the whole box any time without taking each individual sample.

4, Cooling rate consistency is very good on individual experimental. The cooling rate on each sample are the same all the time.

5, No maintenance costs, no need to replace anything, one time purchase will be a long-term usage.

6, Reuse time is short, just 5 minutes apart.

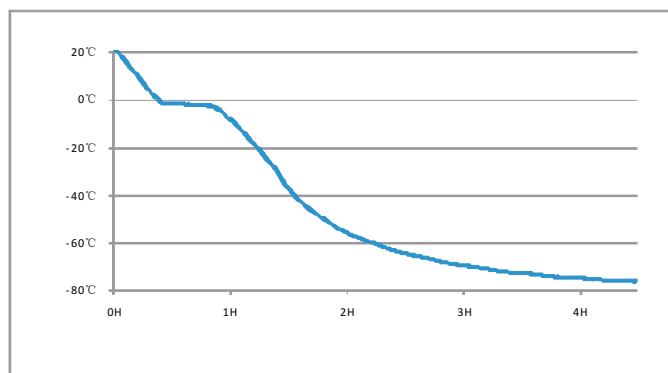
7, The impact inside the low temperature refrigerator is very small and does not require a specific free space.

## Use method

Directly put the sample to be frozen into the tray inside the cooling box, cover the lid. The cooling box must be placed in a low temperature ( $-80^{\circ}\text{C}$ ) environment for at least 3 hours, during the cooling period, do not open the box. After the cooling processing is complete, the sample can be removed and transferred to liquid nitrogen tank for long term storage. If you need continuous usage of the cooling box, open up the lid and the tray, let them both return to normal room temperature, then it can be re-used again.

## Cooling schematic diagram

| Model  | Specification | Weight | Note  |
|--------|---------------|--------|---|
| FZC-01 | S108*100mm    | 120g   | ModeFor 1ml/2ml cryogenic vials or centrifuge tubes(12- $\varnothing$ 13) |
| FZC-02 | 117*117*100mm | 160g   |   |



FreezeCell performance test