差示扫描量热仪

1. 开机

1.1 打开干燥气体(通常为高纯氮气)，流量调为50ml/min。

1.2 打开DSC1主机电源。

1.3 打开计算机，双击桌面上的“STARe”图标进入DSC软件，然后建立软件与仪器的连接DSC1和计算机的打开顺序没有严格要求。

1.4 如果测试中需要反应气或保护气，则打开反应气或保护气的阀门并调节需要的气体流量。

1.5 实验开始前打开机械制冷器。

2. 测试步骤

2.1 点击实验界面左侧的“routine editor”编辑实验方法：

2.1.1 “new”为编辑一个新的方法。

2.1.2 “open”为打开已经保存在软件中的实验方法。

2.2 编辑完一个新方法或打开一个已经保存的方法后，在“Sample Name”一栏中输入样品名称，在“Size”一栏中输入样品重量，然后点击“Sent Experiment”。

2.3 当电脑屏幕左下角的状态栏中出现“waiting for sample insertion”时，打开 DSC 的炉盖，将制备好的含有样品的坩锅放到传感器左侧的环形区域内，盖上炉盖，然后点击软件中的“Ok”键，实验即自动开始。

2.4 测试结束后，当电脑屏幕左下角的状态栏中出现“waiting for sample removal”时，打开炉盖，将样品取出。

3. 关机

3.1 首先关闭机械制冷器。

3.2 然后关闭 DSC1 和计算机（DSC1 和计算机的关闭顺序没有严格要求）。

3.3 关闭反应气或保护气的阀门。

3.4 过 15 分钟后再关闭干燥气的阀门，以防炉体低于室温而结水结霜。

功能

1. 熔点分析
2. 多晶态分析
3. 纯度分析
4. 脂质检测

Differential Scanning Calorimeter (DSC)

1. Turn on the power supply.

1.1 Turn on the dry gas (usually high pure nitrogen), adjusted flow to the 50ml/min.
1.2 Turn on the power supply of DSC.
1.3 Turn on the computer. Double click “STARe” on the desk top to start DSC soft. Connect the DSC1 and the computer. The sequence for 1.2 & 1.3 is not strictly required.
1.4 If the reaction gas or protective gas is needed, turn on a reaction gas or protective gas valve and adjust the gas flow.
1.5 Turn on the mechanical refrigerator before the experiment.

2. Experimental procedure.

2.1 Click "routine editor" on the left side of the experimental interface to edit a new method.
2.1.1 Click “new” to edit a new method.
2.1.2 Click “open” to open a method which has already existed in software.
2.2 After editing a new method or open a method, enter sample name in “Sample Name”, enter weight in “Size”, and then click “Sent Experiment”.
2.3 When the lower left corner of the computer screen appears "waiting for sample insertion", open the DSC furnace cover. Put the crucible containing samples on the annular region at the left side of the sensor. Cover the furnace lid, and then click “OK”, the experiment begins automatically.
2.4 After the experiment, when the lower left corner of the computer screen appears "waiting for sample removal ", open the furnace lid, and take the sample out.

3. Turn off the power supply.

3.1 Turn off the mechanical refrigerator first.
3.2 Turn off the power supply of DSC1 and computer (The sequence for 3.1 & 3.2 is not strictly required).
3.3 Turn off a reaction gas or protective gas valve.
3.4 Turn off the dry gas 15 min later, to prevent any water frost on the furnace body because of the low temperature.

Function

1. Melting point analysis
2. Multi crystal analysis
3. Purity analysis
4. Lipid detection