

## 丁基羟基茴香醚的试样制备

### Sample Preparation, Butylated Hydroxyanisole

试样	丁基羟基茴香醚
Sample	Butylated Hydroxyanisole
应用	非活性成分(抗氧化剂)
Application	Inactive ingredient (antioxidant)
条件	测试仪器: DSC
Conditions	Measuring cell: DSC

坩埚: 40 $\mu$ l铝坩埚, 密封。

Pan: Al 40 $\mu$ l, hermetically sealed.

试样制备: 原样品(1)或在研钵中碾细的晶体。

Sample preparation: As received(1) or crystals ground in a mortar(2).

测试: 以2.5K/min由30°C升温至70°C。

Measurement: Heating from 30°C to70°C at 2.5 K/min.

气氛: 氮气, 50 ml/min

Atmosphere: Nitrogen, 50 ml/min

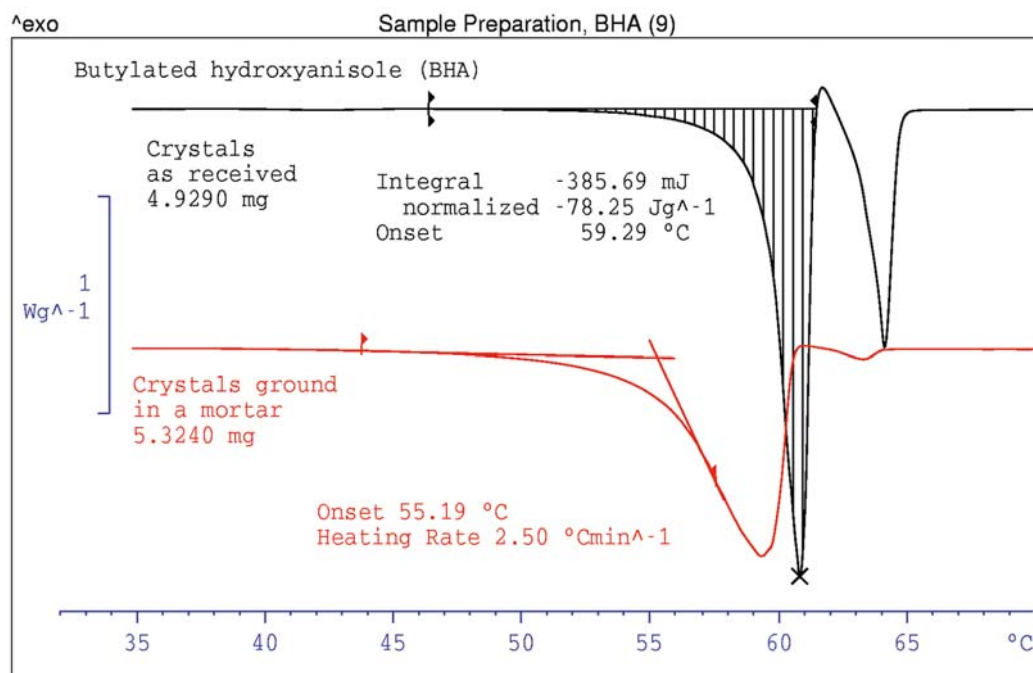


图 3.9 丁基羟基茴香醚原样品(上)和碾细后试样(下)的 DSC 曲线

Figure 3.9 DSC curves of Butylated Hydroxyanisole crystals as received (above) and ground (below)

### 解释

#### Interpretation

图 3.9 为丁基羟基茴香醚原样品和碾细后试样的 DSC 曲线。两条曲线表明试样制备可能给测量结果带来的影响。两种情况下，可观察到温度范围和熔融热明显不同的两个熔融峰。解释原因为丁基羟基茴香醚的多晶型行为，两个峰对应着可能的不同晶型。

Figure 3.9 displays DSC curves of Butylated Hydroxyanisole crystals as received and ground. The two curves show the effects that sample preparation can have on the results. In both cases, two melting peaks can be observed that differ noticeably in temperature range and in the heats of fusion. The explanation lies in the polymorphic behavior of butylated hydroxyanisole. The two peaks correspond to the possible crystal modifications.

### 计算

#### Evaluation

试样制备	起始点 1	$\Delta H$	起始点 2	$\Delta H$
Sample preparation	Onset 1	J/g	Onset 2	J/g
	°C		°C	
原样品	59.3	78.2	63.3	27.6

as received				
在研钵中碾细 ground in a mortar	55.1	96.8	61.7	1.7

## 结论

### Conclusion

试样制备不同(尤其是机械处理)可能导致不同的测量结果。对于呈多晶型的物质尤其如此。

A difference in sample preparation (especially mechanical treatment) can lead to different results. This is particularly the case with substances that exhibit polymorphism.