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TA5012 - Melting of an extremely small amount of dotriacontane

Introduction

Dotriacontane is a linear-chain hydrocarbon. In the present work, we measured a small amount to evaluate the performance of DSC.

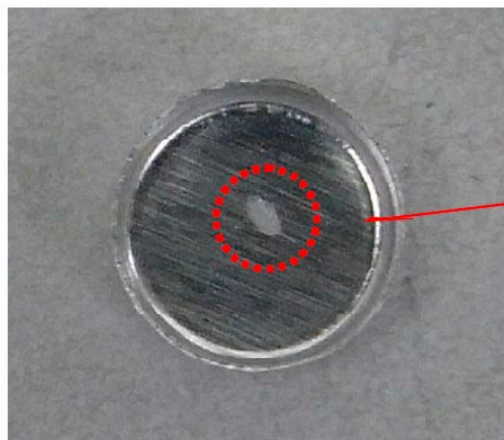
Instrument: DSC8231

Featuring a new electric furnace and new electric furnace circuit technology, this system offers low noise and improved baseline stability.

Measurement and analysis

DSC measurement result of dotriacontane observes that two endothermic peaks, an endothermic peak due to the transition on low-temperature side and an endothermic peak due to melting on the high-temperature side.

In usual thermal analysis, to measure at high resolution, the measurement conditions should be small amount of sample and set heating rate at low. However, these measurement conditions make the peak small and hard to verify it.



Sample

DSC8231 achieves low noise, and is available to measure such as small amount of sample and verify the peak with good resolution, hence the results, it is useful to measure valuable sample.

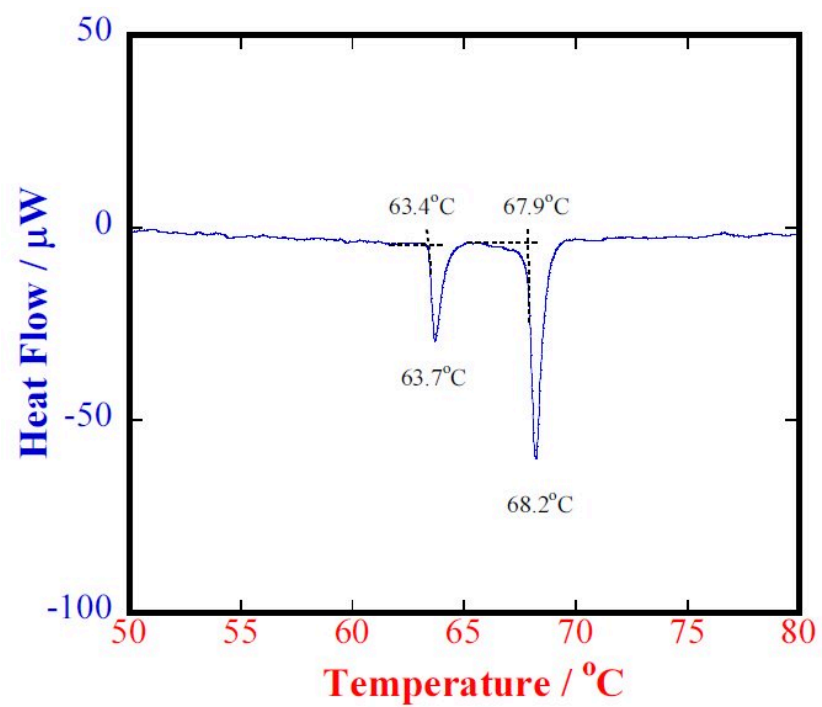
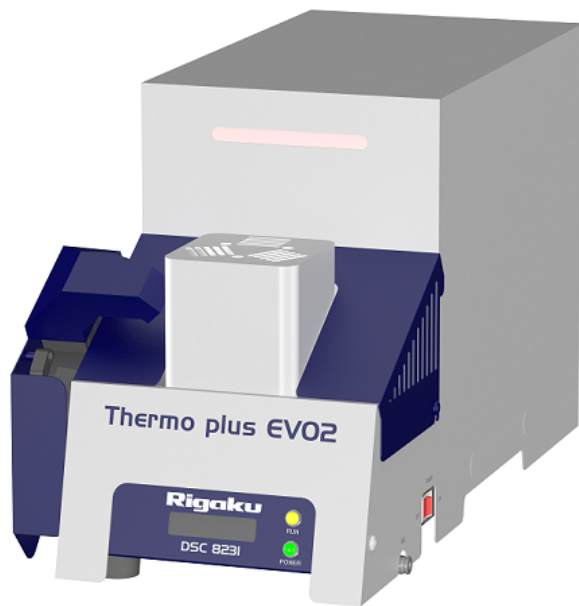


Figure 1: DSC measurement result of dotriacontan, sample amount 3 μm , heating rate 5 $^{\circ}\text{C}/\text{min}$

Related products



DSC8231

Quantifies the energy changes in reactions such as melting, transition, crystallization and glass transition temperature.