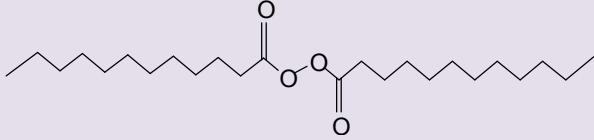
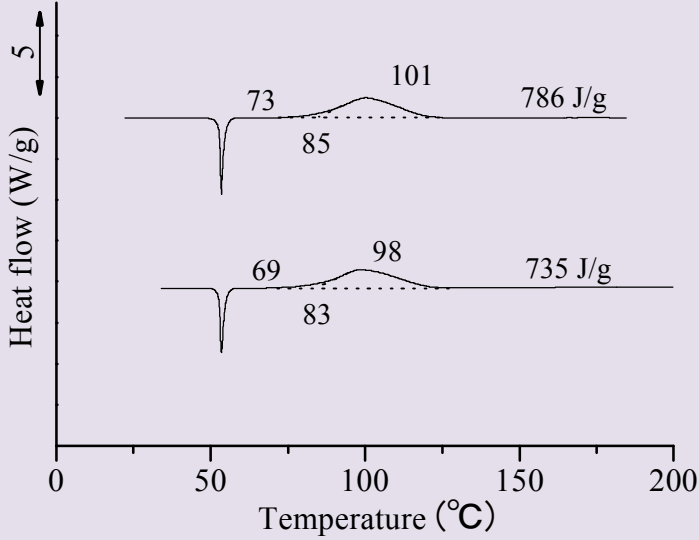
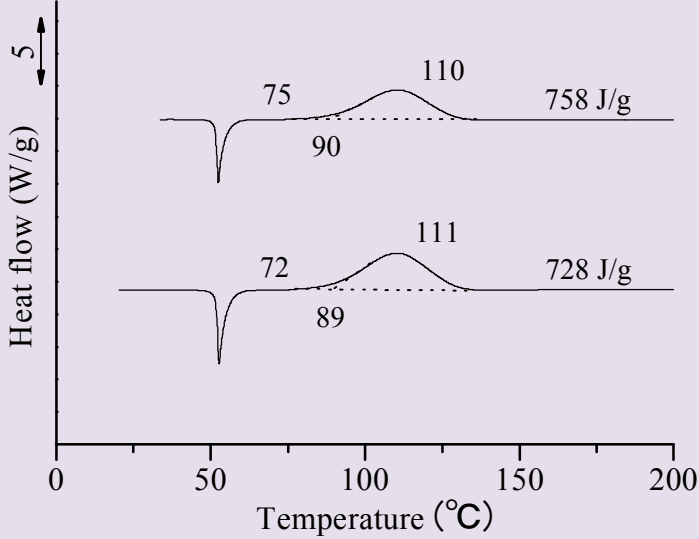
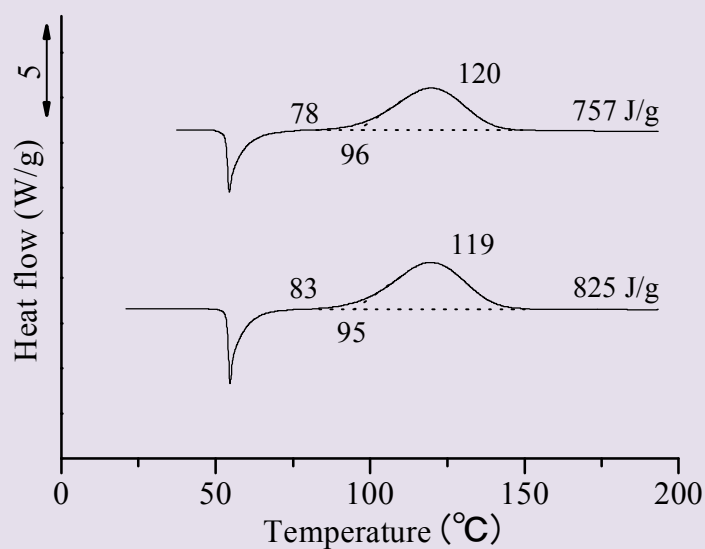


| | |
|---|---|
| Lauroyl peroxide | $C_{24}H_{46}O_4$ LPO |
|  | DSC device: SII DSC 7020 SII Nano Technology Inc. dT/dt: 2, 5, 10, 20 K/min Atmosphere: Air Vesel: pressure vessel (SUS) SII Nano Technology Inc. Sample: Alfa Aesar (>97%) |
| a) 2 K/min AlfaAesar: AlfaAesar社 (販売 和光純薬工業株式会社) | |
|  | <Average> T_a : 71 °C T_o : 84 °C T_{top} : 100 °C Q_{DSC} : 761 J/g |
| b) 5 K/min | |
|  | <Average> T_a : 74 °C T_o : 90 °C T_{top} : 111 °C Q_{DSC} : 743 J/g |

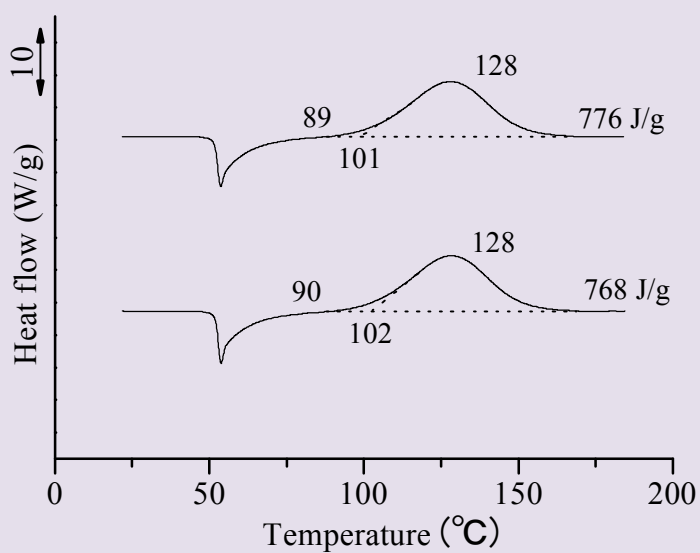
c) 10 K/min



<Average>

| | |
|-------------|---------|
| T_a : | 81 °C |
| T_o : | 96 °C |
| T_{top} : | 120 °C |
| Q_{DSC} : | 791 J/g |

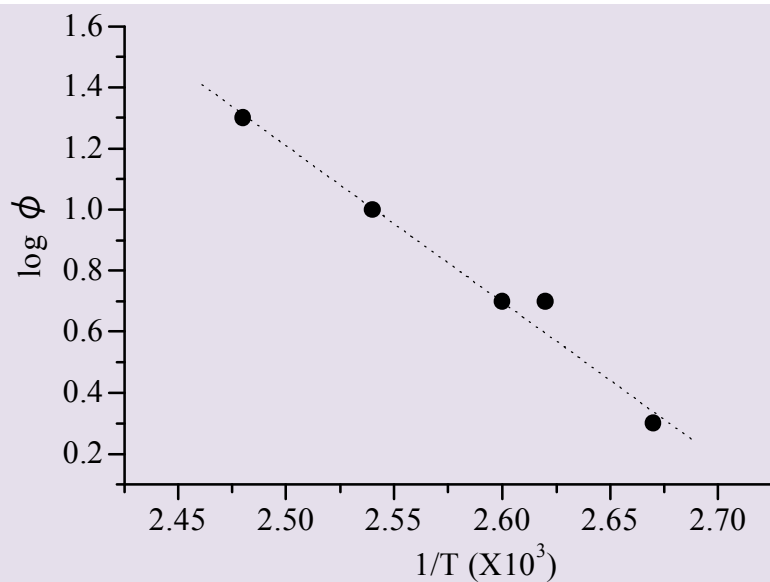
d) 20 K/min



<Average>

| | |
|-------------|---------|
| T_a : | 90 °C |
| T_o : | 102 °C |
| T_{top} : | 128 °C |
| Q_{DSC} : | 772 J/g |

ASTM PLOT



$\Delta E : 95 \text{ kJ/mol}$
 $A : 6.87 \times 10^{16}$
 $r : -0.99257$

| Heat rate ϕ (K/min) | T_{peak} (°C) | T_m (K) | $1/T_m \cdot 10^3$ | $\log \phi$ |
|-----------------------------|---------------------------|--------------|--------------------|-------------|
| 2 | 102 | 375 | 2.67 | 0.301 |
| | 102 | 375 | 2.67 | 0.301 |
| 5 | 111 | 384 | 2.60 | 0.699 |
| | 109 | 382 | 2.62 | 0.699 |
| 10 | 120 | 393 | 2.54 | 1.00 |
| | 120 | 393 | 2.54 | 1.00 |
| 20 | 130 | 403 | 2.48 | 1.30 |
| | 130 | 403 | 2.48 | 1.30 |