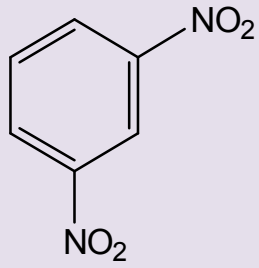
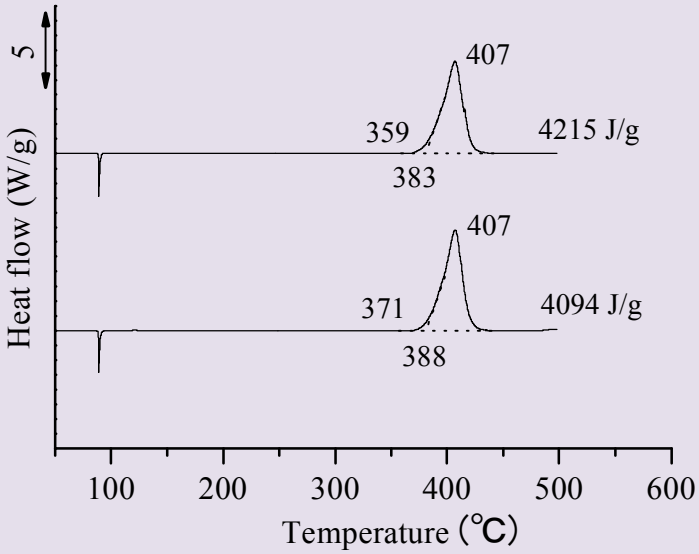
産業技術総合研究所　高エネルギー物質研究グループ
発熱分解エネルギー測定の標準化　　熱分析結果

m-dinitrobenzene	$C_6H_4(NO_2)_2$　DNB
	DSC divice : 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 : Wako (> 99.0%)

Wako：和光純薬工業株式会社

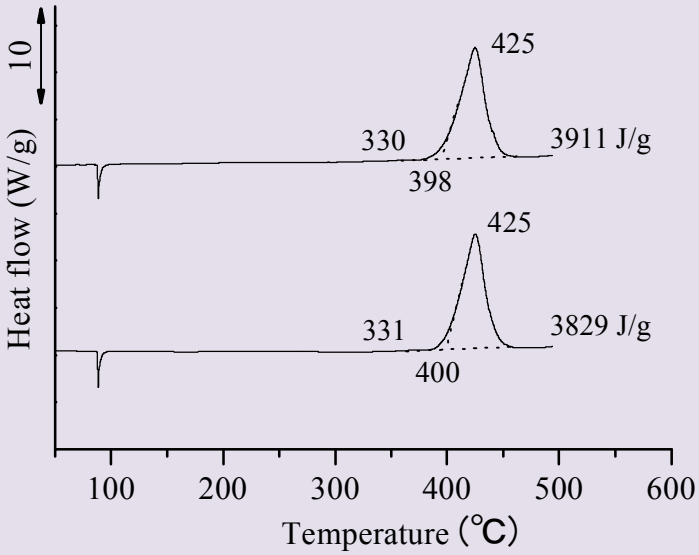
a) 2 K/min



＜Average＞

T_a :　365 ℃
T_o :　386 ℃
T_{top} :　407 ℃
Q_{DSC} :　4155 J/g

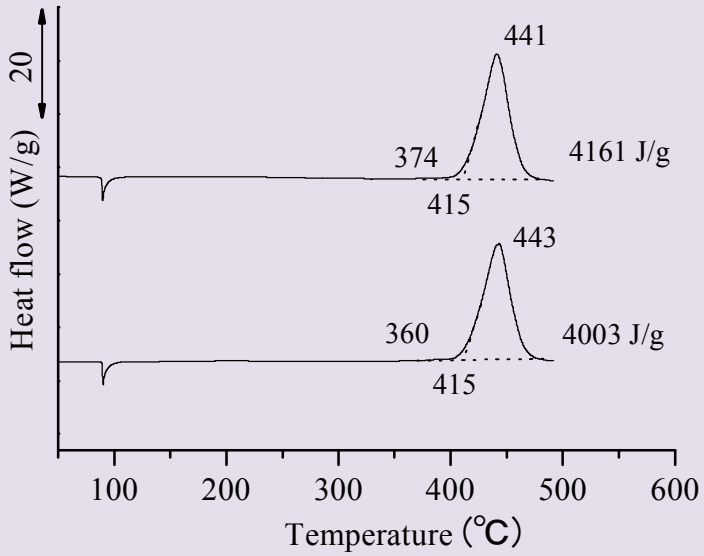
b) 5 K/min



＜Average＞

T_a :　331 ℃
T_o :　399 ℃
T_{top} :　425 ℃
Q_{DSC} :　3870 J/g

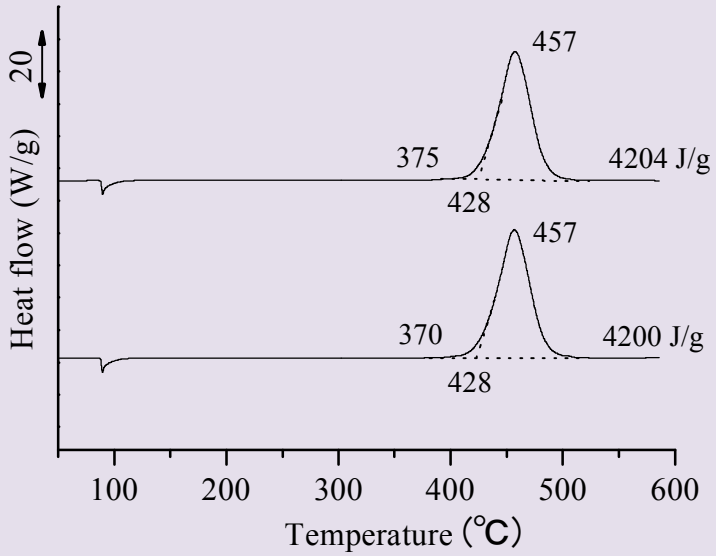
c) 10 K/min



＜Average＞

T_a :	367	℃
T_o :	415	℃
T_{top} :	442	℃
Q_{DSC} :	4082	J/g

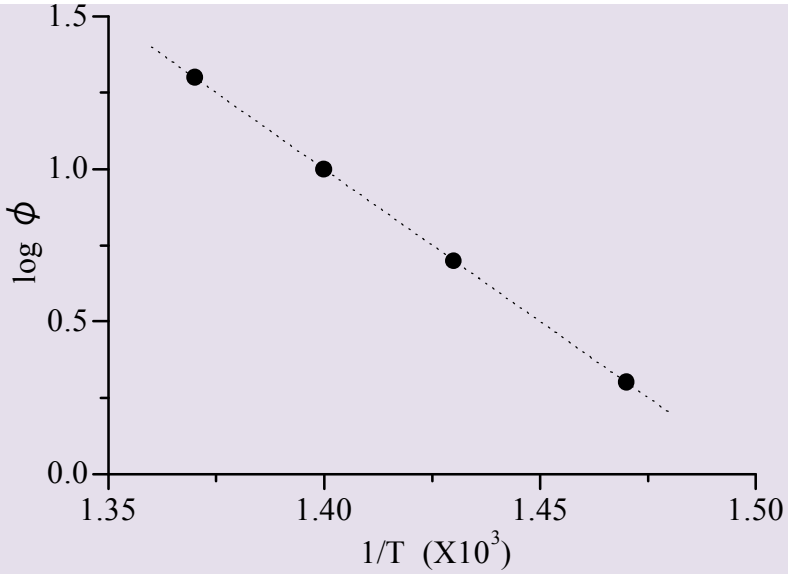
d) 20 K/min



＜Average＞

T_a :	373	℃
T_o :	428	℃
T_{top} :	457	℃
Q_{DSC} :	4202	J/g

ASTM PLOT



ΔE : 187 kJ/mol

A : 1.24 x 10^{33}

r : -1

Heat rate φ (K/min)	T_{peak} (℃)	Tm (K)	1/Tm·10^3	log φ
2	407	680	1.47	0.301
	407	680	1.47	0.301
5	425	698	1.43	0.699
	425	698	1.43	0.699
10	441	714	1.40	1.00
	443	716	1.40	1.00
20	457	730	1.37	1.30
	457	730	1.37	1.30