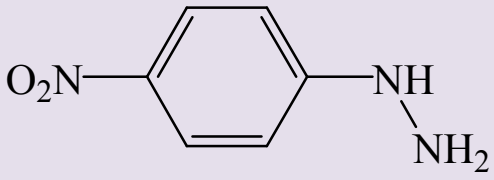
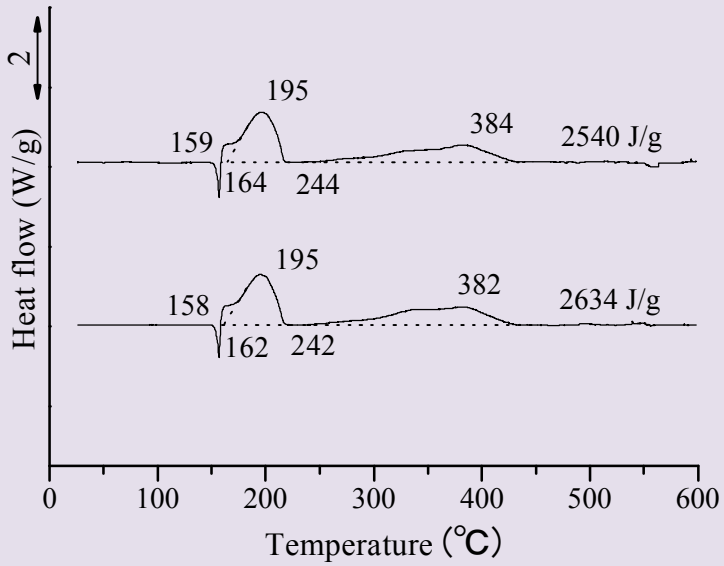
産業技術総合研究所　高エネルギー物質研究グループ
発熱分解エネルギー測定の標準化　　熱分析結果

p-Nitrophenylhydrazine	$C_6H_7N_3O_2$　pNPH
	DSC divice : DSC8270B Rigaku Corp. dT/dt: 2 , 5, 10, 20 K/min Atmosphere: Air Vesel : pressure vessel (SUS) Rigaku Corp. Sample : TGI　(> 95.0%)

TGI：東京化成工業株式会社

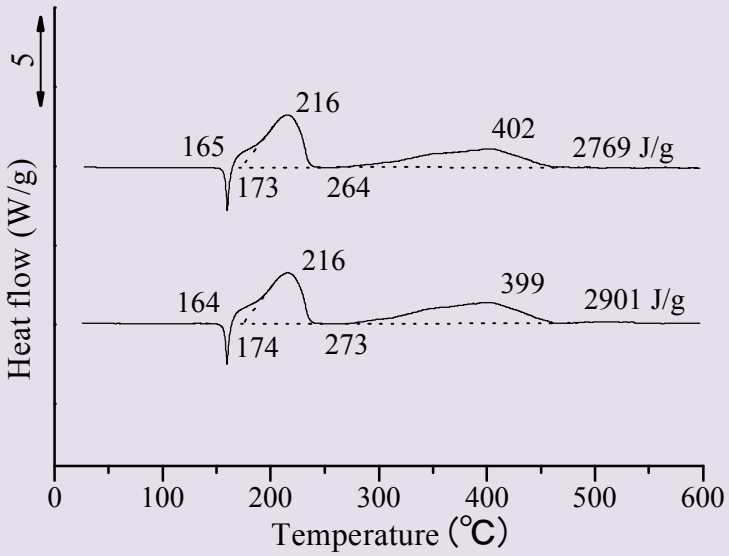
a) 2 K/min



＜Average＞

T_a :	159	℃
T_o :	163	℃
T_{top} :	195	℃
Q_{DSC} :	2587	J/g

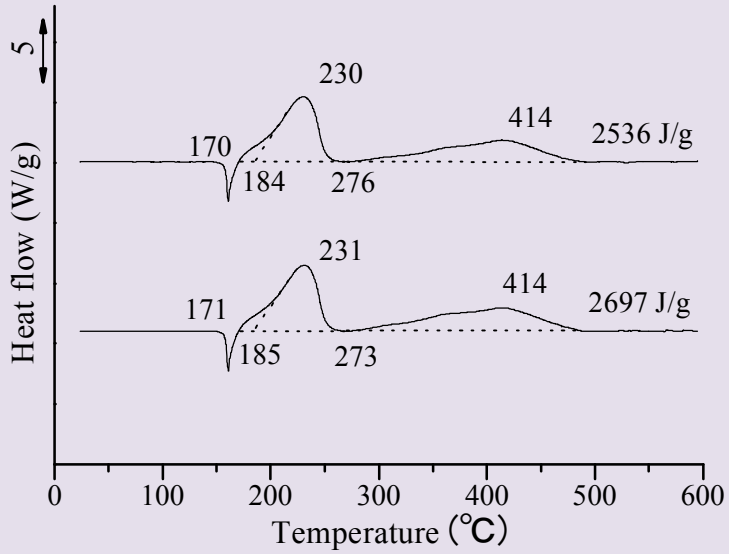
b) 5 K/min



＜Average＞

T_a :	165	℃
T_o :	174	℃
T_{top} :	216	℃
Q_{DSC} :	2835	J/g

c) 10 K/min



＜Average＞

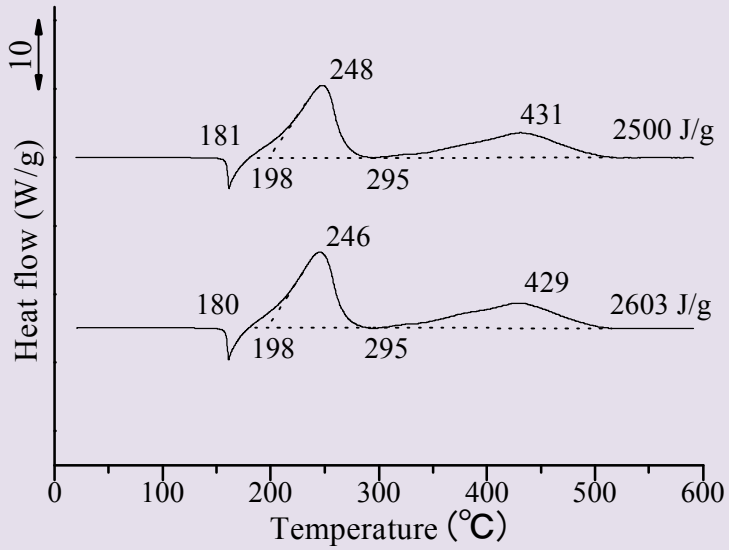
T_a : 171 ℃

T_o : 185 ℃

T_{top} : 231 ℃

Q_{DSC} : 2617 J/g

d) 20 K/min



＜Average＞

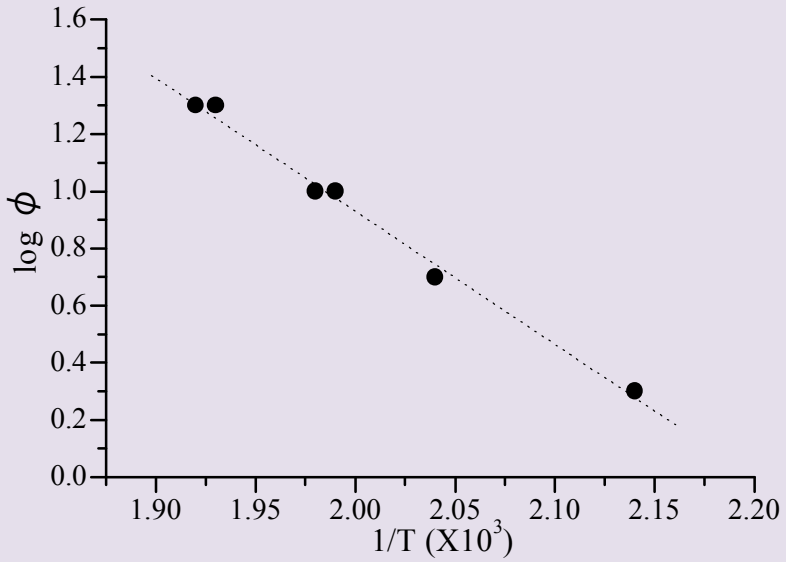
T_a : 181 ℃

T_o : 198 ℃

T_{top} : 247 ℃

Q_{DSC} : 2552 J/g

ASTM PLOT



ΔE : 87 kJ/mol

A : 1.82×10^{15}

r : -0.9963

Heat rate φ (K/min)	T_{peak} (℃)	Tm (K)	$1/Tm \cdot 10^3$	log φ
2	195	468	2.14	0.301
	195	468	2.14	0.301
5	216	489	2.04	0.699
	216	489	2.04	0.699
10	230	503	1.99	1.00
	231	504	1.98	1.00
20	248	521	1.92	1.30
	246	519	1.93	1.30