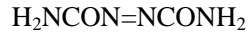
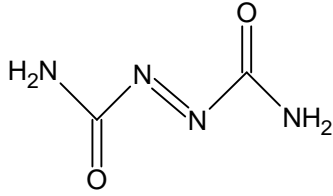


Azodicarbonamide



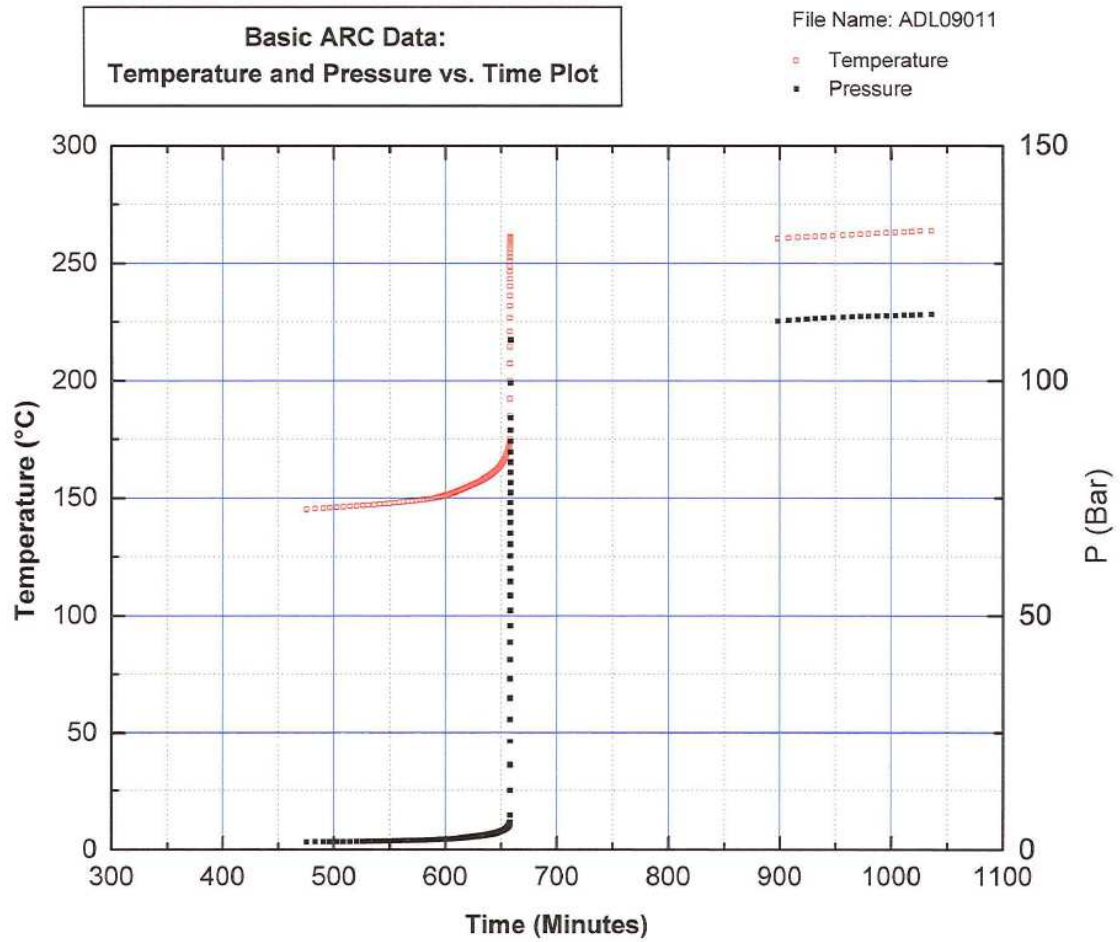
ADCA



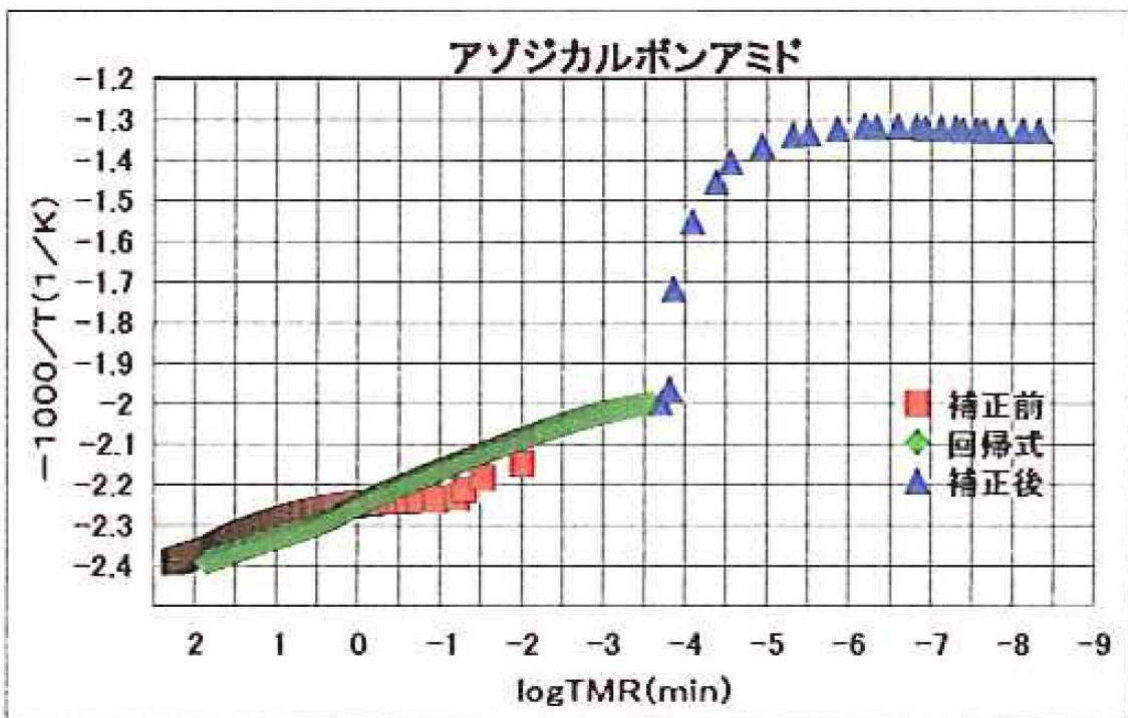
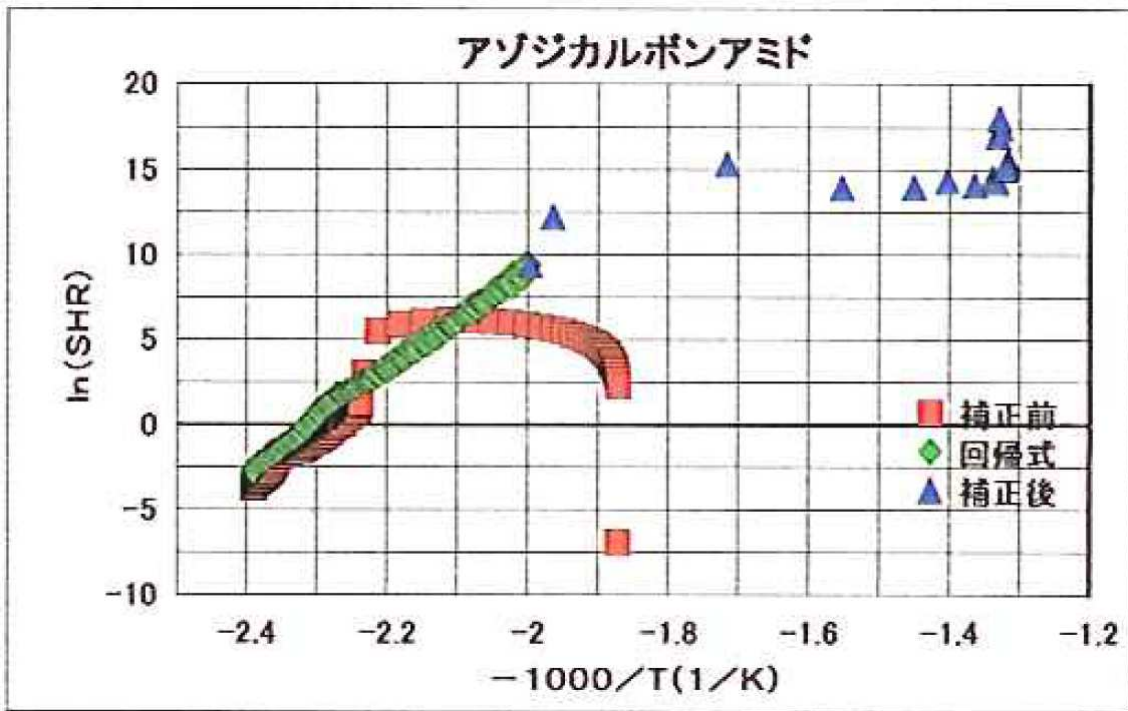
ARC device: ARC2000 (Arthur D. Little Inc.)

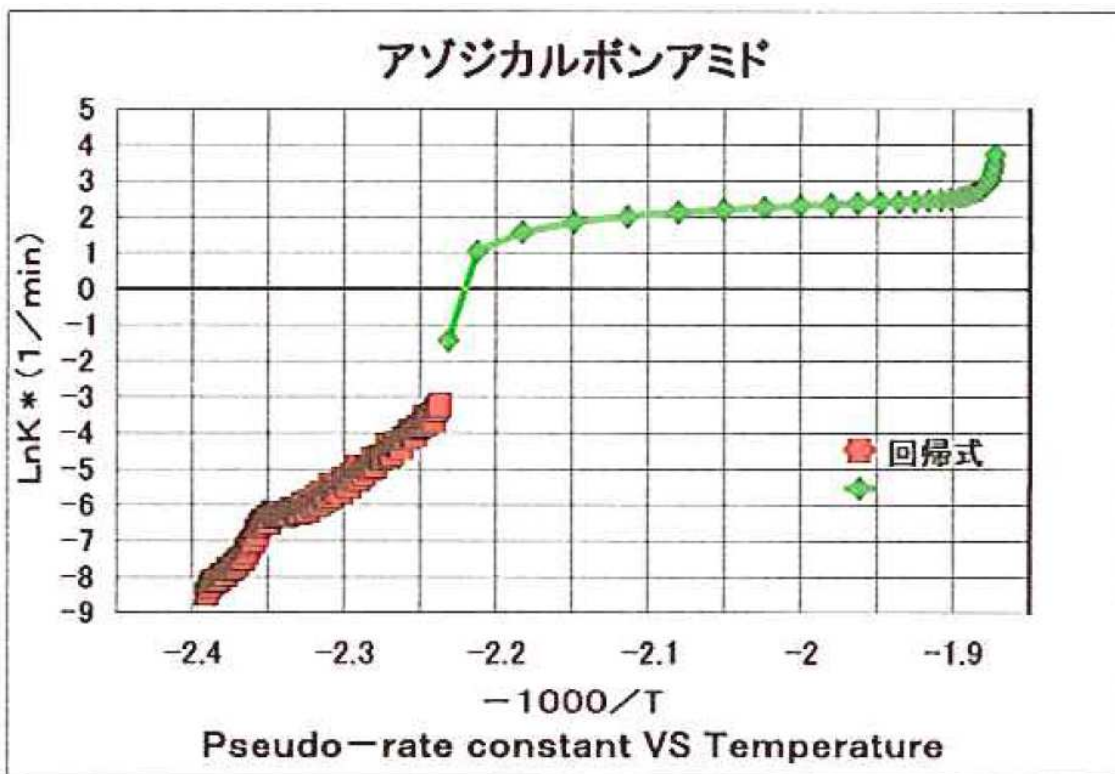
Date: 2009/1

Operator: KJ



Time vs. Temperature and Pressure





Arrhenius equation (approximate calculation)

	Date	2009/1/15
Measuring conditions	ARC device	ARC2000 (Arthur D. Little Inc.)
	Operating Institute	KJ
	Operator	KJ
	Material of Bomb	Hastelloy C
	Weight of Bomb (g)	15.120
	Volume of Bomb (mL)	about 9
	Weight of sample (g)	1.654
	Weight of residue (g)	0.510
	Specific heat of Bomb ( $J K^{-1} g^{-1}$ )	0.419
	Specific heat of sample ( $J K^{-1} g^{-1}$ )	2.093
	$\phi$ facotr	2.83
	Start temperature ( $^{\circ}C$ )	50
	End temperature ( $^{\circ}C$ )	350
	Temperature increment (K)	5
	Waiting time (min)	10

	Searching time (min)	10
	Exothermic threshold (K min <sup>-1</sup> )	0.02
	Logging intervals (°C)	0.2
	Pressure limit (kPa)	17000
	Atmosphere	Air, atmospheric pressure
Results	T <sub>o</sub> , Exothermic temperature (°C)	145.13
	Self heating rate at T <sub>o</sub> (K min <sup>-1</sup> )	0.024
	Pressure at T <sub>o</sub> (kPa)	170
	Temperature at maximum self heating rate (°C)	199.96
	Maximum self heating rate (K min <sup>-1</sup> )	465.15
	Pressure at maximum self heating rate (kPa)	2790
	Pressure rising rate at maximum self heating rate (kPa min <sup>-1</sup> )	29107
	Maximum pressure (kPa)	10870
	Maximum pressure rising rate (kPa min <sup>-1</sup> )	33107
	Temperature at maximum pressure rising rate (°C)	291.07
	Time to maximum rate (min)	182.64
	Maximum temperature (°C)	261.27
	Adiabatic temperature rise (°C)	116.14
	Activation energy (kJ mol <sup>-1</sup> )	250.8
Heat of decomposition (J g <sup>-1</sup> )	686.6	
Corrected results	T <sub>ARC</sub> , Exothermic temperature (°C)	135.66
	Time of maximum rate at T <sub>ARC</sub> (min)	318.85
	Self heating rate at T <sub>ARC</sub> (K min <sup>-1</sup> )	0.02
	Maximum self heating rate (K min <sup>-1</sup> )	6.44 × 10 <sup>7</sup>
	Maximum temperature (°C)	486.96
	Adiabatic temperature rise (°C)	351.30
	Heat of decomposition (J g <sup>-1</sup> )	736.9