

## 35 KTiOPO<sub>4</sub> (KTP) family

### 35A Pure compounds

#### No. 35A-1 NaSbOSiO<sub>4</sub>, Sodium antimonyl silicate

( $M = 252.829$ )

1a	Ferroelectric phase transition was suggested by dielectric anomaly by Simon et al. in 1993. Two anomalies were found in dielectric and calorimetric studies.			93Sim
b	phase	II	I	
	state	(F)	P	
	crystal system	orthorhombic	orthorhombic	94Fav
	space group	Pna2 <sub>1</sub> –C <sub>2v</sub> <sup>9</sup>	Pnan–D <sub>2h</sub> <sup>6</sup>	93Mil1
	Θ [°C]	700(30)		93Mil1
		530(10)		94Fav
	ρ <sub>x</sub> = 3.861 · 10 <sup>3</sup> kg m <sup>–3</sup> .			93Mil1
	Transparent and colorless.			93Mil2
2a	Ceramics were obtained by solid state reaction. Sample preparation: Table 35A-1-001.			93Mil1
3a	<i>a</i> = 12.799(2) Å, <i>b</i> = 6.324(1) Å, <i>c</i> = 10.606(2) Å, <i>V</i> = 858.5(4) Å <sup>3</sup> . <i>a</i> = 12.800(4) Å, <i>b</i> = 6.321(2) Å, <i>c</i> = 10.618(3) Å at RT. See also Table 35A-1-001.			91Pag 93Mil1
b	<i>Z</i> = 8. Crystal structure: Table 35A-1-002.			
4	<i>a</i> = 12.8461(9) Å, <i>b</i> = 6.3528(4) Å, <i>c</i> = 10.6574(8) Å at 570 °C.			94Fav
6a	Microcalorimetric measurements: transition enthalpy Δ <i>H</i> = 2.5 · 10 <sup>3</sup> J kg <sup>–1</sup> (Θ = 520 °C).			93Sim
9e	A phase transition was found at 700(30) °C by SHG measurements: see SHG: Fig. 35A-1-001.			93Mil1
11	Luminescence of ions with <i>d</i> <sup>10</sup> configuration.			92Ham