

**No. 31A-7  $\text{NH}_4\text{H}_3(\text{SeO}_3)_2$ , Ammonium trihydrogen selenite***(M* = 274.98; [D: 282.02])

1a	A single crystal of $\text{NH}_4\text{H}_3(\text{SeO}_3)_2$ was grown by Shuvalov et al. in 1969.	69Shu
b	Space group: $\text{P}2_12_12_1\text{-D}_2^4$ . $T_{\text{melt}} = 40\text{ }^\circ\text{C}$ . $\rho = 2.75 \cdot 10^3\text{ kg m}^{-3}$ . Transparent, colorless.	72Tel
2a	Crystal growth: solution method (solvent $\text{H}_2\text{O}$ ), cooling from temperatures lower than $10\text{ }^\circ\text{C}$ in a dark room.	69Shu
b	Crystal form: Fig. 31A-7-001.	
3a	Unit cell parameters: $a = 5.8501(2)\text{ \AA}$ , $b = 17.7772(7)\text{ \AA}$ , $c = 6.3107(3)\text{ \AA}$ at RT. See also $a = 5.81(1)\text{ \AA}$ , $b = 17.56(3)\text{ \AA}$ , $c = 6.25(1)\text{ \AA}$ at $-150\text{ }^\circ\text{C}$ .	72Tel 72Gor 76Gor
b	$Z = 4$ . Crystal structure: Table 31A-7-001, Table 31A-7-002, Table 31A-7-003, Table 31A-7-004; Fig. 31A-7-002. See also For neutron diffraction, see	75Tak  72Gor 74Tel
5a	Dielectric constants: Fig. 31A-7-003.	
9a	Refractive indices: $n_a = 1.684$ , $n_b = 1.651$ , $n_c = 1.652$ for $\lambda = 689\text{ nm}$ .	69Shu
b	Electrooptic constants: $r_{41}^{\text{T}} = 1.8(4) \cdot 10^{-12}\text{ m V}^{-1}$ , $r_{52}^{\text{T}} = 1.5(5) \cdot 10^{-12}\text{ m V}^{-1}$ for $\lambda = 633\text{ nm}$ at $20\text{ }^\circ\text{C}$ .	70Iva2
d	Optical activity: Fig. 31A-7-004.	
13a	NMR: For $\text{ND}_4\text{D}_3(\text{SeO}_3)_2$ , Table 31A-7-005.	