

M26 Ag₂H₃IO₆ group**No. M26-i Ag₂H₃IO₆, Silver trihydrogen periodate**

(M = 441.66; [D:444.68])

1a	Dielectric anomaly associated with a phase transition in Ag ₂ H ₃ IO ₆ was observed by Baertschi in 1943 ^{a)} , and the possibility of antiferroelectricity was mentioned by Gränicher et al. in 1954 ^{b)} .			^{a)} 43Bae ^{b)} 54Gra
b	phase	II ^{a)}	I ^{a)}	^{a)} 43Bae
	state	(A) ^{b)}	P ^{b)}	^{b)} 54Gra
	crystal system	triclinic	trigonal	^{c)} 64Pet
	space group	P $\bar{1}$ – C _i ^{1 c)}	R $\bar{3}$ – C _{3i} ^{2 c)}	^{d)} 56Gra
	Θ [K]	205...245 ^{a)} [245...285] ^{d)}		
	$\rho = 5.6 \cdot 10^3 \text{ kg m}^{-3}$, $\rho_X = 5.75 \cdot 10^3 \text{ kg m}^{-3}$. Color: yellow.			54Gra 71Are
2a	Crystal growth: small crystals were grown from a mixture of 10 % solution of AgNO ₃ in 3 % HNO ₃ with aqueous solution of H ₅ IO ₆ . Gel growth technique: see			45Bae 71Are, 72Are
b	Crystal form: rhombohedral.			71Are
3a	Unit cell parameters: $a = 5.944(3) \text{ \AA}$, $c = 12.711(5) \text{ \AA}$ at RT (phase I, hexagonal setting). In phase II, the unit cell is doubled for both a and c : $a_{II} = 2a_I$, $c_{II} = 2c_I$.			54Gra 54Gra, 57Her
b	Crystal structure analysis by X-rays and neutrons: see			64Pet
5a	Dielectric constant: Fig. M26-i-001.			
6a	Heat capacity: Fig. M26-i-002. Transition heat and transition entropy: $\Delta Q_m = 1496(84) \text{ J mol}^{-1}$, $\Delta S_m = 6.69(42) \text{ J K}^{-1} \text{ mol}^{-1}$. See also			44Ste 75Tel
9a	Birefringence: Fig. M26-i-003. Reflection in infrared region: Fig. M26-i-004.			
13a	NMR: Fig. M26-i-005. Proton magnetic resonance: see Proton spin-lattice relaxation time: $T_1 = 2 \text{ s}$ at 150 K. Proton-iodine double resonance: see			59Bli 62Mil 73Bli, 74Roo
14b	Neutron incoherent scattering: see			72Tem, 73Tem