No. 34A-2 $PbHAsO_4$, Lead hydrogen arsenate (Schultenite)

(M = 347.1; [D: 348.1])

1a Ferroelectricity in $PbHAsO_4$ was first reported by Březina et al. in 1975. 75Bre

b

phase	II	I	
state	F	P	
crystal system	monoclinic	monoclinic	
space group	$Pc-C_s^2$		76Are
Θ [K]	313.7 [D: 435]		75Bre

P_s makes an angle ≈7° to the [100] direction in the(010) plane. 75Bre
Transparent, colorless.

2a Crystal growth: growth from gel. 75Bre

3a Unit cell parameters: a = 4.842 Å, b = 6.743 Å, c = 5.821 Å, β = 95.47°, T = RT. 76Are

b Z = 2 in phase II. 76Are, 82Cho

Crystal structure: isomorphous with $PbHPO_4$. 75Bre
Table 34A-2-001, Table 34A-2-002.

5a Dielectric constant: Fig. 34A-2-001, Fig. 34A-2-002.
Effect of hydrostatic pressure: $d\Theta_{II-I}/dp = -125 \cdot 10^{-9}$ K Pa^{-1}. 78Yas

c Spontaneous polarization: Fig. 34A-2-003.

9a Optical data: n_α = 1.8903, n_β = 1.9097, n_γ = 1.9765, $\Delta n_{\beta\alpha}$ = 0.00194, $\Delta n_{\gamma\beta}$ = 0.0194, $2V$ = 58.23°. λ = 589 nm. 27Spe
Infrared absorption: Fig. 34A-2-004;
see also 76Are, 78Kro

10a Raman scattering: see 76Bli, 77Lav

13a NQR: Fig. 34A-2-005, Fig. 34A-2-006.