

M24 Li(N₂H₅)SO₄ group**No. M24-i Li(N₂H₅)SO₄, Lithium hydrazinium sulfate***(M* = 136.06; [*D*: 141.09])

1a	Ferroelectric activity in Li(N ₂ H ₅)SO ₄ was reported by Pepinsky et al. in 1958. ^{a)} It has, however, been suggested later that this crystal is not ferroelectric. ^{b)}	^{a)} 58Pep ^{b)} 64Nii, 71Sch, 72And
b	Crystal system: orthorhombic at RT. Space group: Pna2 ₁ –C _{2v} ⁹ at RT. Temperature of decomposition ≈ 285 °C. $\rho = 1.96(1) \cdot 10^3 \text{ kg m}^{-3}$. Transparent, colorless.	74And 74And 58Pep 64Bro 64Van
2a	Crystal growth: evaporation from an aqueous solution of LiCO ₃ and (N ₂ H ₆)SO ₄ .	71Sch
3a	Unit cell parameters: $a = 9.929(5) \text{ \AA}$, $b = 8.973(3) \text{ \AA}$, $c = 5.181(2) \text{ \AA}$ at RT.	74And
b	$Z = 4$. Crystal structure: Table M24-i-001, Table M24-i-002, Table M24-i-003; Fig. M24-i-001; see also For projections of the structure: see	74And 67Pad 64Bro
4	Thermal expansion: see	66Dev
5a	Dielectric constant: Fig. M24-i-002, Fig. M24-i-003; see also No dielectric peak was found in the region from –196 to 140 °C.	87Bad 58Pep
6a	No heat capacity anomaly was found in the region from –120 to 205 °C.	58Pep
9a	Refractive indices: Table M24-i-004. Birefringence: $\Delta n_{ab} = n_a - n_b = 2.350(9) \cdot 10^{-3}$, $\Delta n_{ca} = n_c - n_a = 3.70(2) \cdot 10^{-3}$, $\Delta n_{cb} = n_c - n_b = 6.02(3) \cdot 10^{-3}$ for $\lambda = 551 \text{ nm}$ at RT. Infrared spectra: see	77Bud 66War
10a	Raman scattering: see	65Kri
11	Electrical conductivity: Fig. M24-i-004, Fig. M24-i-005. The apparent hysteresis loops seem to result from saturation of the ac conduction. See also	71Sch, 72Sch 64Van
13a	NMR: see	63Cut, 69How, 70Sch, 71Kni, 72Has, 72Par
b	ESR: see	63Bli
14a	The mechanism of previously supposed ferroelectric switching in Li(N ₂ H ₅)SO ₄ crystals was examined by studying the effect of the anomalous scattering of neutrons from ⁶ Li on the structure factors of Bijvoet pairs both before and after ferroelectric switching. The absence of any observable change confirms that Li(N ₂ H ₅)SO ₄ is not ferroelectric.	72And