

No. 43A-2 $\text{K}_2\text{Mg}_2(\text{SO}_4)_3$, Potassium magnesium sulfate (langbeinite) $(M = 415.00)$

Langbeinite is the name of the mineral $\text{K}_2\text{Mg}_2(\text{SO}_4)_3$. Crystals belonging to this family are isomorphous to this crystal.

1a	Phase transitions in $\text{K}_2\text{Mg}_2(\text{SO}_4)_3$ were found by heat capacity in 1990 by Boerio-Goates et al.				90Boe	
b	phase	IV	III	II	I	90Boe
	state				P	
	crystal system				cubic	
	space group				$\text{P2}_13 - \text{T}^4$	
	θ [K]	51.0	54.9	63.8		
Phase transition temperature: Table 43A-2-001. See also Table 43A-13-001 in No. 43A-13. Color: transparent and colorless.						
2b	Crystal growth: cooling of the molten salt.					90Boe
3a	Unit cell parameter: Table 43A-2-002.					65Wyk
b	$Z = 4$. Crystal structure: Table 43A-2-003; Fig. 43A-2-001, Fig. 43A-2-002.					
5a	Dielectric constant: Fig. 43A-2-003.					
6	Heat capacity and entropy: Table 43A-2-004, Table 43A-2-005; Fig. 43A-2-004. Transition entropy: see Table 43A-13-002 in No. 43A-13.					
9a	Refractive index: Table 43A-2-006, Table 43A-2-007; see also Fig. 43A-13-016 in No. 43A-13.					
b	Electrooptic constant: Table 43A-2-006.					
d	Optical activity: Fig. 43A-2-005.					
11	Luminescence: Fig. 43A-2-006, Fig. 43A-2-007.					
13b	ESR of Fe^{3+} : see ESR of VO^{2+} : see					92Bot 70Cho