

t-o-t layers

Table 22.8. Smectite group and vermiculite

Smectite	<i>Dioctahedral</i>	beidellite	$(\text{Na}, \text{Ca}_{0.5})_{0.3} \text{Al}_2 (\text{Si}, \text{Al})_4 \text{O}_{10} (\text{OH})_2 \cdot n (\text{H}_2\text{O})$
		montmorillonite	$(\text{Na}, \text{Ca})_{0.3} (\text{Al}, \text{Mg})_2 \text{Si}_4 \text{O}_{10} (\text{OH})_2 \cdot n (\text{H}_2\text{O})$
		nontronite	$\text{Na}_{0.3} \text{Fe}_2 (\text{Si}, \text{Al})_4 \text{O}_{10} (\text{OH})_2 \cdot n (\text{H}_2\text{O})$
		volkonskoite	$\text{Ca}_{0.3} (\text{Cr}^{3+}, \text{Mg}, \text{Fe}^{3+})_2 (\text{Si}, \text{Al})_4 \text{O}_{10} (\text{OH})_2 \cdot 4 (\text{H}_2\text{O})$
		swinefordite	$(\text{Ca}, \text{Na})_{0.3} (\text{Li}, \text{Mg})_2 (\text{Si}, \text{Al})_4 \text{O}_{10} (\text{OH}, \text{F})_2 \cdot 2 (\text{H}_2\text{O})$
	<i>Trioctahedral</i>	saponite	$(\text{Ca}_{0.5}, \text{Na})_{0.3} (\text{Mg}, \text{Fe}^{2+})_3 (\text{Si}, \text{Al})_4 \text{O}_{10} (\text{OH})_2 \cdot 4 \text{H}_2\text{O}$
		sauconite	$\text{Na}_{0.3} \text{Zn}_3 (\text{Si}, \text{Al})_4 \text{O}_{10} (\text{OH})_2 \cdot 4 \text{H}_2\text{O}$
		hectorite	$\text{Na}_{0.3} (\text{Mg}, \text{Li})_3 \text{Si}_4 \text{O}_{10} (\text{F}, \text{OH})_2$
		stevensite	$(\text{Ca}_{0.5})_{0.3} \text{Mg}_3 \text{Si}_4 \text{O}_{10} (\text{OH})_2$
		yakhontovite	$(\text{Ca}, \text{Na})_{0.5} (\text{Cu}^{2+}, \text{Fe}^{2+}, \text{Mg})_2 \text{Si}_4 \text{O}_{10} (\text{OH})_2 \cdot 3 \text{H}_2\text{O}$
		zincsilite	$\text{Zn}_3 \text{Si}_4 \text{O}_{10} (\text{OH})_2 \cdot 4 (\text{H}_2\text{O})$
		IMA2002-025	$\text{Ca}_{0.3} (\text{Fe}, \text{Mg}, \text{Fe})_3 (\text{Si}, \text{Al})_4 \text{O}_{10} (\text{OH})_2 \cdot 4 \text{H}_2\text{O}$
	vermiculite	$(\text{Mg}, \text{Fe}^{2+}, \text{Al})_3 (\text{Al}, \text{Si})_4 \text{O}_{10} (\text{OH})_2 \cdot 4 (\text{H}_2\text{O})$	