

## Abstract

$\text{NaNb}(\text{BO}_3)_2$  and  $\text{CaPb}(\text{BO}_3)_2$ , analogues of nordenskiöldine, were synthesized in Mourey bombs at temperatures of 330° and 450°C at pressures of 121.1 atmospheres and above.  $\text{NaNb}(\text{BO}_3)_2$  forms colorless, tabular hexagonal crystal that are soluble in water and optically negative,  $n_o \approx 1.52$ ,  $n_e \approx 1.41$ .  $\text{CaPb}(\text{BO}_3)_2$  forms hexagonal prisms with perfect basal cleavage,  $n_o = 1.707(5)$ ,  $n_e = 1.601(3)$  with cell dimensions  $c = 13.38$  Å,  $a = 4.59$  Å. Further study of these products, the effect of substituting only for the  $\text{Sn}^{+4}$  ion in nordenskiöldine, and of the system  $\text{Na}_2\text{O} - \text{Nb}_2\text{O}_5 - \text{B}_2\text{O}_3 - \text{H}_2\text{O}$  is required.