

The niobium phosphate bronze.  $\beta$ -( $\text{K}_{2}\text{Na}_{2-x}\text{Nb}_{8}\text{P}_{5}\text{O}_{34}$ ), second form of the first member of the series ( $\text{K}_{3}\text{Nb}_{6}\text{P}_{4}\text{O}_{26}$ )<sub>n</sub> ...

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Description

A new niobium phosphate bronze  $\beta$ -( $\text{K}_{2}\text{Na}_{2-x}\text{Nb}_{8}\text{P}_{5}\text{O}_{34}$ ) has been isolated. Its structure was solved by single crystal x-ray diffraction for  $x=0.27$ . It crystallizes in the space group  $P4_2m$  with  $a=10.612(1)$  and  $c=6.384(1)$  Å. This phase is the second form of the first member of the series ( $\text{K}_{3}\text{Nb}_{6}\text{P}_{4}\text{O}_{26}$ )<sub>n</sub>  $\text{KNb}_{2}\text{PO}_{8}$ . The structural relationships with other members of this series and especially with  $\text{K}_{7}\text{Nb}_{14}\text{P}_{9}\text{O}_{60}$  ( $n=2$ ) are discussed.