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**ynthesis and superconducting proprieties on the Nb-Co-B system**[1] LUCAS EDUARDO CORREA, FREDERICO BENEDETTO SANTOS, BRUNO DE LIMA, Universidade de So Paulo, ZACHARY FISK, University of California at Irvine, ANTONIO JEFFERSON MACHADO, Universidade de So Paulo — Since the discovery of the superconductivity in $MgB_2$ a renew interest in borides systems have increased in the last years. The interesting in the boride systems is how rare is the superconductivity occurrence. Many $MRB_2$ (MR - Refractory metal) crystallize in the same prototype structure than $MgB_2$ type $AlB_2$. However just $NbB_2$ is a known superconductor material with superconducting critical temperature close to 3.9 K. So in this work we shall show results which suggest that small substitution of Nb for Co on the $Nb_{1-x}Co_xB_2$ stoichiometry nominal increase superconducting critical temperature from 3.9 K without Co to 5 K in the $Nb_{0.95}Co_{0.05}B_2$ nominal composition. These results are sustained by magnetization, resistivity and heat capacity measurements.

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