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**Rietveld Refinement of the Crystal Structure of the Ceramic Superconductor
(Hg,Re)-1223**

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Samples of the ceramic superconducting compound (Hg,Re)-1223 with nominal composition $\text{Hg}_{0.82}\text{Re}_{0.18}\text{Ba}_2\text{Ca}_2\text{Cu}_3\text{O}_{8+d}$ and with different oxygen content were studied using synchrotron radiation diffraction. The studied samples were produced with different oxygen stoichiometries through treatments under different oxygen partial pressures. The crystallographic study of the samples was performed by means of synchrotron radiation powder diffraction at two different energies (normal and anomalous scattering) at D10B-XPD beamline of the Brazilian National Synchrotron Laboratory – LNLS. The diffraction data were analyzed by means of Rietveld refinement in order to study the crystal structure of the superconducting phase and determine the stoichiometry of the samples.