

CdTe is one of the most interesting X-ray and g-ray detectors' material. This work deals with influence of deep levels to photoelectric properties of CdTe. PICTS, Lux-Ampere and spectral dependences measurements at room temperature and low temperature 10K were performed on one undoped and several variously doped (Cl, Sn and Ge) samples and applied electrical fields up to  $800\text{V.cm}^{-1}$ . Experimental setups are introduced. Room temperature numerical solution of sample photoelectrical properties for typical midgap level using drift-diffusion and Poisson equation was performed and results are discussed. The experimentally observed slopes of Lux-ampere characteristics and energy shifts of the main photoconductivity peak with the applied voltage are explained based on a model of screening of electric field by charge accumulated on deep levels. Finally comparison with acquired experimental data is performed yielding estimates of maximum total concentration of deep levels in the samples.