Method for laser-induced polarimetric detection of dichroism of dehydrated blood films of deceased persons with different blood loss volumes is carried out by mapping laser microscopic images of biological tissues and algorithmic reconstruction of laser-induced intensity maps of polycrystalline architectonics of supramolecular networks by measuring coordinate distributions of secondary object intensity. Wherein to assess changes in maps of linear and circular dichroism of a microstructure of supramolecular polycrystalline networks, samples of dehydrated blood films are placed in an optical path of a laser Stokes polarimeter beam with four polarization channels: a plane-polarized state with azimuths of 0°, 90°, 45°, and a circularly ⊗ polarized state. Laser-induced probing is performed for each polarization state, irradiating a sample of a dehydrated blood film, and a laser-induced polarization image is projected by a micro-objective onto a plane of photosensitive pixels of a digital camera through six optical channels: linear polarization with azimuths of 0°, 90°, 45°, 135°; and right- and left-circular ⊕, ⊗ polarization. Furthermore, sequential registration is carried out by photosensitive pixels of the digital camera with subsequent algorithmic reproduction of maps of amplitude anisotropy as a coordinate distribution of linear and circular dichroism of a microstructure of polycrystalline architectonics of samples of dehydrated blood films, which are evaluated by calculating central statistical moments of 1st-4th orders, by values of which a conclusion about blood loss volume is made.