In the method of determining the volume of somatic cells in mammals, organs are prepared for further histological examination. Fix the pieces of material in formalin. Washed in running water with subsequent filling of the material into the sealing medium. Cuts are made for differentiation of structural elements. Cuts are painted. Rinse in water, dehydrate them in alcohols of increasing strength, illuminate in carbol-xylol and placed in a balm, covering the histological structure with a covering glass. As an object of study, muscle fibers of the myocardium are used. Fixation of pieces of material is carried out in cenker-formola. Paint for differentiation of structural elements by transferring slices into a solution with iodine content, maintaining to a state of yellowing, and the latter control the saturation under a microscope, for which the cuts are rinsed in water, transfer them to 0.25 % solution of hyposulfite until complete discoloration. Washed in distilled water. Transfer to 2.5 % solution on distilled water iron-ammonium haloons. Remove excess paint by washing for 1-2 hours in tap water. Rinse in distilled water. Transfer slices to a solution of hematoxilin for 24-36 hours. Next, consistently rinsed in tap and distilled water and differentiated in 2.5 % solution on distilled water of iron-ammonium haloons. Rinse in distilled water to a state of clearly expressed black nuclei of cardiomyocytes, and cardiomyocytes themselves to gray-blue color with pronounced transverse banding. The appropriate cuts are finally washed in tap water. Dehydrate histological slices of 96° and absolute ethyl alcohol. Illuminated in carbol-xylol. Placed in the balm and determine for each cardiomyocyte their volume and their average value.