

The present invention can be used in microelectronics for testing properties of superconductors. The proposed method for detecting the changes of the properties of the surface of a high-temperature superconductor implies noncontactly measuring of the diamagnetic susceptibility of the superconductor by a corresponding transducer and forming an anisotropic control zone at the surface of the superconductor in its treatment process. The method is distinctive by determining the diamagnetic susceptibility ( $A$ ) depending on an angle ( $\varphi$ ) between the anisotropic axis of the control zone and the magnetic flux vector of the external magnetostatic field, which is arranged in the plane of the tested surface. The magnetic strength of the external magnetostatic field must not exceed the critical magnetic strength for the material of the superconductor. The change of the properties of the surface of the superconductor is detected from the characteristic  $A = f(\varphi)$  under condition that  $\Delta A > \Delta A_0$ , where  $\Delta A$  is the increase of the diamagnetic susceptibility,  $\Delta A_0$  is the threshold of the sensitivity of the transducer.