According to developing technology and conditions of modern life, use of radiation is rapidly increased. Unwittingly, our organs and tissues are exposed to radiation continuously. In order to avoid exposure to this radiation, some studies were carried out on protective clothing. In this study, radiation keeping properties of the fabrics coated with barite are examined. Radiation keeping properties were also determined by the method of image processing. After the experiments, it is determined that barite-coated fabrics absorb radiation better than normal fabrics.