Potassium, uranium and thorium are primary radionuclides from which have existed since the Earth's formation. The values of these three natural radionuclides which are existed more or less in natural environment can be calculated from results of measurement of high energy gamma rays which are emitted by primary radionuclides. Gamma rays are generally used to determine natural radiation of the environment so as to having a higher penetration than the alpha and beta particles. In this study, gamma-ray measurements were made by gamma-ray spectrometry in the 165 points in the Isparta Angle showing the array in North-South direction on the Ağlasun (Dereköy-Yazır) volcanics that outcrop in the south. This 165 spectrometric data were evaluated. Distribution map of the obtained uranium, thorium and potassium elements and terrestrial gamma dose rate and annual effective dose rate maps of the region were occurred. In the results of the study, concentration values of potassium, uranium, and thorium elements changed between 0-3.2 %, 0.19-10 ppm and 0.67-35 ppm respectively. In addition, while the absorbed dose rate was observed changing between 14.48 and 180 nGy/h, annual effective dose rate was observed changing between 0 and 0.25 mSv/y. In the study area, absorbed dose rate which are obtained as 180 nGy/h has been shown to be over the global average (50 nGy/h-UNSCEAR, 1988). Similarly, the annual effective dose rate value (0.25 mSv/y) has been also determined to be under the global average (0.5 mSv/y-UNSCEAR, 2000).