In this study, genetic distance among 4 triticale cultivars cultivated in our country and 4 triticale lines was examined using the inter simple sequence repeat (ISSR-PCR) method and the 14 of used 16 primers gave polymorphic bands. The average polymorphism rate in the genotypes used in the study was determined as 42.27 %; in addition, in total, 97 bands and 41 polymorphic bands were obtained. Research results showed that the average number of bands per polymorphic primer and the number of polymorphic bands was 6.9 and 2.9, respectively and the similarity ratios between the genotypes used in this study were found to be between 44-89 %. According to the unweighted pair group method with arithmetic mean (UPGMA) analysis results, in terms of genetic similarity, Tacettinbey and Tatlıcak 97 varieties were the most distant, but SDÜ-43 and Tacettinbey varieties were the closest among the genotypes. On the other hand, in terms of genetic variation, Karma 2000, Tacettinbey variety and SDÜ-43 line placed in the same group. In this study, establishing to be in attendance of a genetic variation evident and accord with the aim among triticale varieties registered in Turkey, it was understood that ISSR-PCR method was quite reliable and a beneficial technic in selecting of the appropriate methods and from this viewpoint in determining of genotypic the similarity / diversity in the breeding of the line to be the candidate variety.