The Comparison of Konya Basin Pliocene aged two coal fields in terms of element content

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The purpose of this study is to compare two seperate pliocene aged coal units found in eastern and western part of the Konya Basin located in Central Turkey in terms of their element content. First of these areas, The Karapınar coal units are 100 km. east of Konya, and the second unit Ilgın is about 90 km. west. Both areas are analyzed for their main and trace element enrichments and compared.

In the Karapınar area; pre-Neogene basement rocks comprise Jurassic – Cretaceous units. These units are overlain by Neogene fluvial sediments and lacustrine deposites. Coals are found in the lacustrine sediments. In the Ilgın area; the pre-Neogene rocks are made of Palaozoic – Mesozoic metamorphic rocks and crystalline limestone. Coal bearing sediments lie unconformably on the Mesozoic – Palaeozoic rocks. The Pliocene coal bearing units are made of conglomerate, sandstone, siltstone and claystone.

When Karapınar coals are compared to the average universal coal content, high element values are found for As, Cs, Ni, Sr, U and V. In the case of Ilgın, Ti, Cs, Rb, Ta, Th, As, Nb, La, Ce, Pr, Nd and Sm are above average. Only As and Cs are the enriched elements in both areas. Lithologic differences of the areas are the cause of the variations of the element enrichments.