

Distribution of Platinum Group elements (PGE) in chromites from some selected areas from Denizli and Muğla provinces, SW Turkey

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Totally 61 chromite samples were collected from six different regions; Acıpayam and Beyağaç at Denizli and Ula, Köyceğiz, Dalaman and Fethiye at Muğla at the southwestern region of Turkey. As a result of tectonic movements, this Likya nappe formed two tectonic zones; lower and upper with different environments and ages. Lower tectonic unit consists essentially of thin to medium stratified brownish or reddish claystone, siltstone, micritic and sandy limestone, sandstone, shale and conglomerate interbedded. While, upper tectonic unit comprises the oldest rock units; pelitic and bioclastic carbonate rocks are interbedded with Carboniferous and Middle Triassic sandstone and quartzite and tectonically overlies by psammitic arkoses which contain Permian pillow lava. The ophiolitic rocks that constitute the uppermost part of the Likya nappe contain the chrome mineralization. In all regions of Denizli and Muğla, the chromites that are podiform type (Alpine type) have generally low contents of platinum group elements. Values of platinum group elements in Acıpayam, Beyağaç, Ula and Köyceğiz, Fethiye regions range from 5 ppb to 50 ppb and Au content is observed less than 100 ppb. While, some chromite samples from Dalaman area in Muğla have enrichment of Pt, Pd, Rh, Ir and Au that ranging from 20 to 4230 ppb for Pt, 9 - 15100 ppb for Pd, 6 - 77 ppb for Rh, and 25 - 55 ppb for Ir and 100 - 134 ppb for Au.

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