

The Yankan accretion complex as an example of spatial combination of OIB, BABB, N-MORB type metabasalts

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The Yankan accretion complex is distinguished in the eastern part of the Mongolian-Okhotsk fold belt and is a packet of tectonic plates, wedge scales mainly composed of volcano-siliceous deposits. Volcano-siliceous formations are associated with lense-like masses of serpentinous restite ultrabasites, cumulose and isotropic gabbroes, diabase of a dismembered ophiolite complex of presumably Middle Paleozoic age. Among basites N-MORB, BABB, OIB-type basalts are singled out. N-MORB-type metavolcanics are found as clastic material in the melange zone in a combination with restite ultrabasites. Those are characterized by subhorizontal REE spectra with slight LREE deficit showing ratio $La/Yb(N) = 1.1-0.5$, distinct Eu minimum, predominance of Nd, Sm, Gd over both LREE and HREE as well as insignificant Nb deficit and weak enrichment in Rb, Ba, Sr. The overwhelming majority of metavolcanics of the Yankan accretion complexes (the Dzhailinda, Shakhtaun formations) is characterized by higher degree of REE concentration and more differentiated spectrum of their distribution showing ratio $La/Yb(N) = 2.2-6.5$. Those are close to E-MORB type metavolcanics but show insignificantly higher contents of LREE, P, Zr, Ti. At the same time a distinct Nb deficit compared to LILE and LREE allows us to refer those to BABB-type. OIB-type basalts are quite rare. These rocks are characterized by high degree of LREE concentration exceeding the chondrite level more than 100 times, with higher degree of differentiation spectrum showing ratio of $La/Yb(N) = 5.4-10.7$ as well as a distinct enrichment in LILE and HFSE.