

Geochemical characteristics of central Chile (33 °-34 °S) granitoids

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Seventeen granitoid samples from batholiths in central Chile (33 °-34 ° S) have been analyzed for trace element content. The samples range in age from Paleozoic to Tertiary, and in rock type from quartz diorite to granite. In general, compared to andesites from central-south Chile these rocks are more siliceous with lower abundances of compatible trace elements and higher abundances of incompatible trace elements. However, Upper Tertiary granodiorites have important geochemical similarities, such as highly fractionated rare-earth element (REE) distributions relative to chondrites, to some modern andesites in this region; e.g., Marmolejo. Similar highly fractionated REE distributions are also common in the cores of zoned intrusive sequences in the Sierra Nevada of the western U.S. Based on limited sampling of central Chile Cretaceous and Tertiary plutonics, there may be a west to east increase in light REE/heavy REE ratio and in Sr content. Compared to the Upper Tertiary granodiorites,