COMPOSITIONAL GAP OF Ca-AMPHIBOLES IN METABASITES OF THE RIBEIRA BELT, AÇUNGUI AND SETUVA GROUPS, STATE OF PARANÁ, BRAZIL

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The Ca-amphiboles of metabasites of Adrianópolis (Açungui Group) and Campo Largo (Setuva Group) regions occur as homogeneous crystals of hornblende and actinolite, and also as single crystals coexisting the both phases in equilibrium. In this case there is optically and chemically abrupt interfaces between them in the form of patchwork and/or zoning with the actinolite totally surrounded by hornblende.

Between the two mineral phases occur a compositional gap in patchwork and/or zoned crystals as well as in the compositional trends in grains displaying only one of these phases in the following intervals: Si = 6.8 to 7.4; Al^{VI} = 0.3 to 0.6; Al^{IV} = 0.6 to 1.2.

The beginning of the compositional gap of Ca-amphiboles of metabasites of Adrianópolis and Campo Largo, marks the metamorphic temperature of 420-440°C with the association hornblende-actinolite-albite($An_{1\ to\ 7}$)-epidote-chlorite-titanite-quartz. It reaches temperature of 530°C in the metabasites of Adrianópolis and from this point the hornblende presents continuous solid solution, being the only amphibole until the metamorphic pick of 575°C and 4 to 6 kbar, with the association hornblende-oligoclase($An_{16\ to\ 28}$)-andesine($An_{39\ to\ 42}$)-garnet($alm_{58\ to\ 61}$)-ilmenite-quartz. In the metabasites of Campo Largo the gap reaches a metamorphic pick (510°C and 5 to 7 kbar) with the association hornblende-actinolite-albite($An_{1\ to\ 5}$)-oligoclase($An_{21\ to\ 26}$)-epidote-chlorite-titanite-ilmenite-quartz.