

Distinctive characteristics among the fluid inclusions from quartz veins of the Acari batholith (RN-Brazil) and micaschists of the aureole installed around this batholith.

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The metamorphic aureole, a few kilometers width, is synchronous with the emplacement of the Acari intrusive calc-alcaline granitic body. The samples submitted the microthermometry were collected in veins of the batholite and of the micaschists. The aquo-saline, aquo-carbonic and carbonic inclusions were identified in the veins of the higher temperature zones (cordierite + sillimanite and cordierite + andaluzite) and of the batholite. Essentially carbonic and aqueous inclusions were observed in the lower temperature zones (biotite+garnet and biotite+chlorite+muscovite). The microthermometry data show an increase of salinity of the aqueous fluid in direction to the zones of higher temperature and to the batholite. This increase of temperature is characterized by the presence of salt cubes originated from fluids mineral from reactions involving biotite and plagioclase, and this corroborates with the process of formation of the index minerals, such as cordierite and andaluzite in the high temperature zones. The low melting temperature of CO₂ indicates the presence of a more impure carbonic fluid in direction to the batholite, however, the carbonic inclusions of the biotite+chlorite+muscovite zone also show very low melting of the CO₂, which probably is due to the concentration of nitrogen in these inclusions. Also, the fluids constituted of H₂O-NaCl-CO₂ ± (CH₄±N₂) show a salinity increasing in direction to the granitic body.