

HYDROGEOCHEMICAL DATA IN GEOLOGICAL MAPPING PROGRAMMES

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Samples of ground/stream/lake water were collected from several parts of the island differing in their underlying lithology. Ground water chemistry was closely related to the underlying rock, whereas such a correlation seems to be less significant for stream/lake waters, where the solid rock phase and the aqueous phase are not in equilibrium.

The total dissolved solids increased with the ferro-magnesium content of the host rock. Terrains known to be mafic, felsic, etc. appeared as clusters in plots of calcium vs. magnesium. In some cases, abnormally high potassium: sodium ratios up to 0.5 were observed. These can be ascribed to the entry of potassium into the aqueous phase from the crushed rock or from other contaminant sources.

Hydrogeochemical data can thus be used in geological investigations especially when rock outcrops are not being exposed.

References

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