

Group	Summary
Igneous petrology:	A medium-grained gabbro crosscut by an amphibole vein. The gabbro displays a subophitic texture. Clinopyroxene is strongly altered.
Metamorphic petrology:	The sample consist a vein, a halo and an altered host gabbro. Observed assemblages record amphibolite, greenschist and clay alteration processes.
Structure:	Isotropic magmatic fabric cross-cut by a polycrystalline metamorphic vein showing an halo of green amphibole.

Plane-polarized



32919521

Cross-polarized



32919541

IGNEOUS PETROLOGY

Lithology: gabbro

Observer: CL

Texture: subophitic

Ave. grain size: medium grained [345]

Detailed description: A medium-grained gabbro crosscut by an amphibole vein. The gabbro displays a subophitic texture, in which tabular plagioclase is partly or fully enclosed within clinopyroxene. Clinopyroxene is strongly altered. In particular, it is completely replaced by green amphibole close to the vein. Consertal intergrowth texture can be seen in some clinopyroxene grains.

Mineral	Original (%)	Size min. (mm)	Size max. (mm)	Size mode (mm)	Shape	Habit	Comments
Plagioclase	60	0.6	8	3.6	subhedral	tabular	undulose extinction
Clinopyroxene	40	0.8	11	3.6	anhedral	subequant	completely replaced by green amphibole

METAMORPHIC PETROLOGY

Total rock alteration estimate (%): 40

Observer(s): JL

Detailed description The sample consist of a vein, a halo and an altered host rock. Plagioclase and clinopyroxene from the host rock are slightly to moderately altered, respectively. In the halo and the vein, Cpx is completely altered into green amphibole while some plagioclase remained relatively fresh. The vein is composed of clinozoisite and tremolite-actinolite. Replacement of the green amphibole that composed the halo by tremolite-actinolite were observed. A later stage replacement of plagioclase by clay was also observed. These greenschist and clay alteration events superimposed a much earlier high-temperature vein that caused the formation of the abovementioned green amphibole replacement of Cpx in the halo. Overall, this vein and halo features different metamorphic events that grades from high temperature (amphibolite facies or felsic vein) to greenschist and lastly a clay alteration event.