



Petrogenesis of Fe-Ti oxides in amphibole-rich veins from the Lherz orogenic peridotite (Northeastern Pyrénées, France)

Jean Pierre Lorand, Michel Grégoire

► To cite this version:

Jean Pierre Lorand, Michel Grégoire. Petrogenesis of Fe-Ti oxides in amphibole-rich veins from the Lherz orogenic peridotite (Northeastern Pyrénées, France). Contributions to Mineralogy and Petrology, 2010, 160, pp.99-113. 10.1007/s00410-009-0468-4 . hal-00534818

HAL Id: hal-00534818

<https://hal.science/hal-00534818>

Submitted on 10 Nov 2010

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Table 3: Representative electron microprobe analyses of ilmenite from thick amphibole-rich veins

sample	73-4 core	73-2b vein-wall	73-2b core	73-2c vein wall	73-1A P*	74-18 core	74-18 A*	74-5 core	74-90 core	74-90 A*	70-242
Wt. %											
52.29											
TiO ₂	52.95	53.3	52.7	52.81	52.29	52.96	54.23	52.08	54.64	53.39	53.17
Al ₂ O ₃	-	-	-	-	0.05	-	0.07	-	-	-	
Cr ₂ O ₃	-	-	-	0.08	0.25	0.11	-	-	0.17	0.11	0.02
Fe ₂ O ₃	4.45	4.25	3.55	2.75	1.55	2.35	1.37	3.41	0.83	2.01	2.41
FeO	37.31	37.06	40.37	39.95	43.62	40.72	39.25	39.47	39.85	39.9	39.33
NiO	0.03	-	0.01	0.04	0.02	-	-	0.02	-	-	-
MnO	0.79	0.73	0.46	0.47	0.68	0.59	0.23	0.55	0.52	0.49	0.55
MgO	5.33	5.68	3.68	3.99	1.60	3.57	5.23	3.82	5.35	4.30	4.45
CaO	0.02	0.09	0.02	-	0.06	0.03	0.10	0.04	0.07	0.06	
Sum	100.89	101.12	100.79	100.09	100.15	100.33	100.5	99.38	100.78	100.32	99.93
mol. %											
FeTiO ₃	76.4	75.5	83.2	82.7	92.5	84.6	79.8	82.6	79.8	82.8	81.3
MgTiO ₃	19.5	20.6	13.5	14.7	6.1	13.2	19.0	14.2	19.5	15.4	16.4
Fe ₂ O ₃	4.1	3.9	3.5	3.6	1.4	2.2	1.2	3.2	0.7	1.7	2.3

A* : inclusion in amphibole; P* inclusion in plagioclase.