TABLE DR1. WHOLE ROCK AND CLINOPYROXENE ANALYSES OF JIJAL WEHRLITE-DUNITE

Sample	KH97-038	KH97-047	KH97-050	KH97-057	KH97-060	KH97-077
Rock-Type	*ol-opx-clinopyroxenite*	*clinopyroxenite-wehrlite*	*olivine clinopyroxenite*	*clinopyroxenite-wehrlite*	*clinopyroxenite-wehrlite*	*ol-opx-websterite*
Whole-rock major element composition						
SiO_2 wt%	52.76	51.86	51.35	53.71	53.33	50.21
TIO_2	0.07	0.14	0.09	**b.d.l.*	0.05	0.28
Al_2O_3	1.45	3.32	1.95	1.20	1.03	4.87
Fe_2O_3	5.05	7.91	5.90	6.21	6.20	7.50
MnO	0.07	0.13	0.14	0.14	0.13	0.15
MgO	18.72	21.12	19.87	22.82	23.97	14.87
CaO	19.98	14.65	18.31	16.61	15.95	21.35
Na_2O	0.11	0.16	*bdl*	0.08	0.09	0.04
K_2O	**b.d.l.*	**b.d.l.*	**b.d.l.*	**b.d.l.*	**b.d.l.*	**b.d.l.*
P_2O_5	**b.d.l.*	**b.d.l.*	**b.d.l.*	**b.d.l.*	**b.d.l.*	**b.d.l.*
L.O.I	0.75	1.61	1.93	0.15	0.22	0.19
Total	98.96	100.90	99.54	100.91	100.95	99.46
Mg#	88.1	84.3	87.1	88.0	88.6	79.9
Sc *ppm*	51	41	38	57	49	40
V	138	222	92	156	141	138
Ni	203	240	232	201	228	514
Cr	4,217	3,325	4,129	2,543	3,094	2,418
Solution-ICP-MS analyses of clinopyroxene separates						
La (ppm)	0.081	0.102	0.055	0.022	0.029	0.054
Ce	0.295	0.310	0.253	0.092	0.127	0.258
Pr	0.060	0.096	0.066	0.022	0.029	0.080
Nd	0.3941	0.6358	0.4591	0.1769	0.2061	0.6493
Sm	0.190	0.350	0.254	0.117	0.114	0.432
Eu	0.0867	0.1614	0.1154	0.0597	0.0535	0.2084
Gd	0.314	0.575	0.455	0.233	0.208	0.825
Tb	0.060	0.112	0.086	0.048	0.041	0.164
Dy	0.4504	0.7764	0.6405	0.3766	0.3144	1.2415
Ho	0.092	0.170	0.137	0.083	0.067	0.265
Er	0.2610	0.4509	0.3734	0.2298	0.1907	0.7239
Tm	0.035	0.072	0.051	0.031	0.026	0.098
Yb	0.2179	0.4232	0.3062	0.1920	0.1640	0.5895

Note: Whole rock major elements were analyzed on sample powders by XRF using a PHILIPS PW1404/10 instrument at the CIC (University of Granada, Granada, Spain). Analyses of clinopyroxenes were made on 10-30 mg of high-purity clinopyroxene hand-picked under a binocular microscope to ensure that they were free of inclusions. Clinopyroxenes were analyzed for Rare Earth Elements (REE), on a quadrupole VG-PG2® ICP-MS at ISTEEM (Université de Montpellier 2, Montpellier, France). REE concentrations were determined by external calibration. Dissolution procedures and instrumental conditions of ICP-MS analyses at ISTEEM have been reported elsewhere (Garrido *et al.*, 2006). The analytical reproducibility of the international reference sample PCC-1 (depeleted peridotite), it is in the range of 2-10% for all REE.

* *b.d.l.* = below dectection limit.

TABLE DR2. MAJOR (EMPA) AND TRACE ELEMENT (LA-ICP-MS) ANALYSES OF JIJAL WEHRLITE-PYROXENITE CLINOPYROXENES

Sample	KH97-20		KH97-54		KH97-61	
Rock type	*werhlite*		*olivine-clinopyroxenite*		olivine-clinopyroxenite	
	(n=3)		*(n=3)*		*(n=3)*	
	mean	*σ*	*mean*	*σ*	*mean*	*σ*
SiO_2 wt%	54.05	*0.19*	54.60	*0.03*	54.49	0.12
TIO_2	0.03	*0.01*	0.05	*0.01*	0.03	0.002
Al_2O_3	0.98	*0.01*	0.83	*0.003*	0.73	0.11
Cr_2O_3	0.35	*0.01*	0.47	*0.04*	0.44	0.12
FeO	2.48	*0.05*	2.19	*0.12*	2.26	0.03
MnO	0.13	*0.01*	0.10	*0.03*	0.09	0.01
MgO	17.04	*0.01*	16.83	*0.01*	16.96	0.07
CaO	24.27	*0.00*	24.54	*0.09*	24.36	0.07
Na_2O	0.19	*0.03*	0.21	*0.03*	0.22	0.04
K_2O	*b.d.l.**		*b.d.l.*		*b.d.l.*	
Total	99.53	*0.19*	99.86	*0.12*	99.62	0.29
Mg#	*92.46*	*0.13*	*93.21*	*0.34*	*93.05*	*0.12*
Wo	*48.63*	*0.05*	*49.41*	*0.17*	*49.00*	*0.01*
			LA-ICP-MS analyses			
La ppm	0.044	*0.004*	0.016	*0.002*	0.02	*0.003*
Ce	0.15	*0.01*	0.059	*0.002*	0.09	*0.01*
Pr	0.03	*0.01*	0.015	*0.001*	**N.D.	
Nd	0.225	*0.004*	0.118	*0.003*	0.12	*0.02*
Sm	0.12	*0.01*	0.09	*0.01*	0.08	*0.01*
Eu	0.049	*0.002*	0.037	*0.004*	0.04	*0.01*
Gd	0.21	*0.01*	0.16	*0.02*	0.15	*0.03*
Tb	0.042	*0.003*	0.032	*0.005*	0.030	*0.003*
Dy	0.33	*0.05*	0.27	*0.02*	0.23	*0.02*
Ho	0.07	*0.01*	0.05	*0.01*	0.05	*0.01*
Er	0.202	*0.005*	0.16	*0.02*	0.15	*0.02*
Tm	0.030	*0.006*	0.025	*0.003*	0.020	*0.004*
Yb	0.17	*0.02*	0.15	*0.01*	0.15	*0.02*

Note: Major element composition of clinopyroxene was determined by EMPA on (ca. 150 µm) thick polished sections using a WDS CAMECA SX- 100 at ISTEEM (Université Montpellier II, Montpellier, France). Analytical conditions were 20 kV accelerating voltage and 10 nA beam current. All the elements were measured with counting time of 30 s, except for Mn, Fe and Ni (20 s). In situ analyses of trace elements in clinopyroxene and plagioclase were carried out in the same sections by LA-ICP-MS at ISTEEM using a VG Plasmaquad II turbo ICP-MS, coupled with a Geolas (Microlas) automated platform housing a 193 nm Compex 102 laser from LambdaPhysik. The laser was fired on a 100 µm spot using an energy density of 15 J/cm2 at a frequency of 5 Hz. Signals were acquired in time resolved acquisition, devoting 2 minutes for the blanks and 1 minute for the measurement of the analytes. ^{43}Ca was used as internal standard and analyte concentrations were calibrated against the NIST 610 rhyolitic glass which was measured each three unknowns. Analyses of major and LA-ICP-MS are average of three analyses in different grains from the same thick section.. Also are reported the standard deviation (σ) and the coefficient of variation (cv%) of analyses of the average of analyses.

* b.d.l. = below detection limit.

** N.D. = non determined