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Supplementary material A - Tables of major and trace element mineral compositions from the investigated dikes.

Table A1. WDS calibration routines and standards for analyzed elements from each mineral phase.

Table A2. LA-ICP-MS data-acquisition conditions used for trace elements analyses.

Table A3. Major element concentrations of olivine from the investigated dikes. Structural formula calculated on the basis of 4 oxygens.

Table A4. Trace element concentrations (in ppm) of olivine from the investigated dikes.

Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Table A7. Major element concentrations on amphiboles from the investigated dikes. Structural formula ba

Table A8. Trace element concentrations (in ppm) of amphibole from the investigated dikes.

Table A9. Major element concentrations of micas from the studied dikes. Structural formulae calculated on the basis of 22 oxygens

Table A10. Trace element concentrations (in ppm) of micas from the investigated dikes.

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Table A1. WDS calibration routines and standards for analyzed elements from each mineral phase

Mineral	Element	X-ray line	WDS Channel	Crystal	Standard
Pyroxene	Si	Kα	1	TAP	diopside
	Al	Kα	1	TAP	anorthite
	Fe	Kα	2	LIFL	fayalite
	Mn	Kα	2	LIFL	fayalite
	Ca	Kα	3	PETJ	wollastonite
	K	Kα	3	PETJ	orthoclase
	Ti	Kα	4	LIFL	rutile
	Cr	Kα	4	LIFL	chromite
	Mg	Kα	5	TAPH	diopside
	Na	Kα	5	TAPH	albite
Olivine	Si	Kα	1	TAP	diopside
	Al	Kα	1	TAP	anorthite
	Fe	Kα	2	LIFL	fayalite
	Mn	Kα	2	LIFL	fayalite
	Ni	Kα	2	LIFL	rhyolitic glass #37
	Ca	Kα	3	PETJ	wollastonite
	K	Kα	3	PETJ	orthoclase
	Ti	Kα	4	LIFL	rutile
	Cr	Kα	4	LIFL	chromite
	Mg	Kα	5	TAPH	basalt #8
	Na	Kα	5	TAPH	albite
Amphibole	Si	Kα	1	TAP	diopside
	Al	Kα	1	TAP	hornblende #28
	Fe	Kα	2	LIFL	fayalite
	Mn	Kα	2	LIFL	fayalite
	Ni	Kα	2	LIFL	rhyolitic glass #37
	Cl	Kα	3	PETJ	sodalite
	Ca	Kα	3	PETJ	wollastonite
	K	Kα	3	PETJ	orthoclase
	Ti	Kα	4	LIFL	rutile
	Cr	Kα	4	LIFL	chromite
	Zn	Kα	4	LIFL	ilmenite
	F	Kα	5	TAPH	apatite
	Na	Kα	5	TAPH	albite
	Mg	Kα	5	TAPH	diopside
Mica	Si	Kα	1	TAP	diopside
	Al	Kα	1	TAP	anorthite
	Fe	Kα	2	LIFL	fayalite
	Mn	Kα	2	LIFL	fayalite
	Zn	Kα	2	LIFL	ilmenite
	Cl	Kα	3	PETJ	sodalite
	K	Kα	3	PETJ	orthoclase
	Ca	Kα	3	PETJ	wollastonite
	Ti	Kα	4	LIFL	rutile
	Ba	Lα	4	LIFL	benitoite
	F	Kα	5	TAPH	apatite
	Na	Kα	5	TAPH	albite
	Mg	Kα	5	TAPH	diopside

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Table A2. LA-ICP-MS data-acquisition conditions used for trace elements analyses

Mineral	*Sample*	*Dwell time (µs)*	Standard		
			Internal [1]	*Calibration* [2]	Quality[2]
Olivine	**MT 68F**	Mg, Ni (8.3); remainder (16.7)	Si	NIST-612	BHVO-2
	MT 74E			NIST-612	BHVO-2
	MT 74F			NIST-612	BCR-2G
Clinopyroxene	**MT 64A**	All (16.7)	Ca	NIST-610	NIST-612
	MT 68F			NIST-610	NIST-612
	MT 73C			BHVO-2	NIST-612
	MT 74B			BHVO-2	NIST-612
	MT 74E			NIST-610	NIST-612
	MT 74F			NIST-610	BCR-2G
	MT 75			NIST-610	BHVO-2
	MT 79A			NIST-610	BHVO-2
Orthopyroxene	**MT 74 F**	All (16.7)	Mg	NIST-610	BCR-2G
Amphibole	**MT 68F**	Al, Ca (8.3); REE (25); remainder (16.7)	Ca	NIST-610	BHVO-2
	MT 79A			NIST-610	BHVO-2
Phlogopite	**MT 75**	All (16.7)	Si	NIST-610	NIST-612
	MT 79A		Si	NIST-610	NIST-612

[1] WDS measurements

[2] Reference: Jochum et al. 2005

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Table A3. Major element concentrations of olivine from the investigated dikes. Structural formula calculated on the basis of 4 oxygens.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A
Crystal[1]	1mc	1mc	1mc	1mc	1mc	2mc	2mc	2mc	3mc	3mc
Location[2]	B	B2	I	I2	N	B	I	N	B	I
Type	1	1	1	1	1	1	1	1	1	1
SiO_2	37.97	38.38	39.69	38.83	40.50	38.06	38.41	38.93	38.47	40.14
TiO_2		0.03				0.06		0.02	0.01	
Al_2O_3	0.02	0.06	0.05	0.04	0.05	0.03	0.03	0.04	0.01	0.04
Cr_2O_3			0.00	0.04	0.04		0.04			0.03
FeO	22.04	22.14	15.10	17.82	9.75	22.10	20.67	18.82	21.65	12.59
MnO	0.43	0.43	0.25	0.28	0.14	0.41	0.37	0.28	0.42	0.19
MgO	39.98	38.73	44.70	42.96	49.51	38.82	40.72	42.32	39.50	46.78
CaO	0.32	0.37	0.18	0.19	0.11	0.37	0.31	0.27	0.32	0.15
Na_2O	0.02	0.02	0.00		0.00	0.04	0.03	0.01	0.01	
K_2O	0.03	0.03	0.02		0.00		0.02	0.02	0.03	
NiO	0.15	0.16	0.29	0.22	0.38	0.11	0.14	0.20	0.16	0.36
Total	**100.96**	**100.34**	**100.27**	**100.37**	**100.48**	**100.01**	**100.73**	**100.91**	**100.58**	**100.29**
Si	0.981	0.996	0.996	0.987	0.990	0.992	0.987	0.989	0.994	0.996
Al	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001
Ti	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000
Fe^{2+}	0.476	0.481	0.317	0.379	0.199	0.482	0.444	0.400	0.468	0.261
Mn	0.009	0.009	0.005	0.006	0.003	0.009	0.008	0.006	0.009	0.004
Mg	1.539	1.499	1.672	1.628	1.804	1.508	1.559	1.602	1.521	1.730
Ca	0.009	0.010	0.005	0.005	0.003	0.010	0.008	0.007	0.009	0.004
Na	0.001	0.001	0.000	0.000	0.000	0.002	0.001	0.001	0.001	0.000
K	0.001	0.001	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.000
Ni	0.003	0.003	0.006	0.004	0.007	0.002	0.003	0.004	0.003	0.007
Σ cations	**3.020**	**3.003**	**3.003**	**3.010**	**3.007**	**3.007**	**3.012**	**3.011**	**3.006**	**3.003**
Fo[3]	76.38	75.71	84.06	81.12	90.06	75.78	77.83	80.02	76.47	86.89

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Fo = 100*Mg/(Mg+Fe). Fo = forsterite.

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Table A3. Major element concentrations of olivine from the investigated dikes. Structural formula calculated on the basis of 4 oxygens.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A
Crystal[1]	3mc	3mc	4mc	4mc	4mc	4mc	4mc	5mc	5mc	5mc
Location[2]	I2	N	B	B2	I	IB	N	B	I	N
Type	1	1	1	1	1	1	1	1	1	1
SiO_2	38.18	40.48	38.22	37.71	38.71	38.72	39.45	38.37	38.44	38.39
TiO_2	0.04		0.04	0.08		0.05		0.04	0.01	
Al_2O_3	0.06	0.07	0.05	0.02	0.01	0.03	0.04	0.04	0.04	0.03
Cr_2O_3	0.04	0.03	0.01	0.03	0.01		0.06			
FeO	21.51	9.61	25.63	22.57	18.75	22.16	14.90	22.10	20.77	19.57
MnO	0.43	0.14	0.59	0.44	0.34	0.43	0.21	0.42	0.36	0.34
MgO	39.05	49.43	35.08	38.85	42.30	38.58	45.14	38.81	40.28	41.54
CaO	0.31	0.16	0.50	0.43	0.24	0.39	0.24	0.34	0.30	0.28
Na_2O	0.01	0.01		0.01	0.02	0.03		0.02	0.01	0.01
K_2O						0.01		0.01		
NiO	0.16	0.40	0.08	0.14	0.17	0.11	0.25	0.11	0.14	0.17
Total	**99.79**	**100.33**	**100.21**	**100.28**	**100.55**	**100.52**	**100.29**	**100.27**	**100.35**	**100.33**
Si	0.994	0.991	1.009	0.984	0.987	1.002	0.990	0.996	0.991	0.985
Al	0.002	0.002	0.002	0.001	0.000	0.001	0.001	0.001	0.001	0.001
Ti	0.001	0.000	0.001	0.002	0.000	0.001	0.000	0.001	0.000	0.000
Fe^{2+}	0.468	0.197	0.566	0.492	0.400	0.480	0.313	0.480	0.448	0.420
Mn	0.009	0.003	0.013	0.010	0.007	0.010	0.004	0.009	0.008	0.007
Mg	1.516	1.803	1.381	1.511	1.608	1.489	1.688	1.502	1.548	1.589
Ca	0.009	0.004	0.014	0.012	0.006	0.011	0.006	0.009	0.008	0.008
Na	0.001	0.000	0.000	0.001	0.001	0.001	0.000	0.001	0.000	0.001
K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ni	0.003	0.008	0.002	0.003	0.003	0.002	0.005	0.002	0.003	0.003
Σ cations	**3.003**	**3.008**	**2.988**	**3.016**	**3.012**	**2.997**	**3.007**	**3.001**	**3.007**	**3.014**
Fo[3]	76.41	90.15	70.93	75.44	80.08	75.62	84.36	75.78	77.56	79.09

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Fo = 100*Mg/(Mg+Fe). Fo = forsterite.

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Table A3. Major element concentrations of olivine from the investigated dikes. Structural formula calculated on the basis of 4 oxygens.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-74F	MT-74F	MT-74F
Crystal[1]	6mc	6mc	6mc	6mc	7mic	8mic	8mic	1mc	1mc	1mc
Location[2]	B	I	IB	N	N	N	N2	B	N	NI
Type	1	1	1	1	1	1	1	1	1	1
SiO_2	37.99	38.45	37.97	38.42	38.47	38.14	37.87	38.19	40.46	40.46
TiO_2	0.07	0.01	0.02		0.04		0.05	0.06		0.07
Al_2O_3	0.04	0.03	0.06	0.04	0.04	0.04	0.02	0.00	0.03	0.21
Cr_2O_3	0.02	0.06		0.03		0.00	0.02		0.03	0.01
FeO	23.47	21.80	22.50	20.52	20.01	22.13	22.19	24.62	10.15	10.12
MnO	0.49	0.43	0.46	0.35	0.36	0.47	0.42	0.55	0.16	0.14
MgO	37.74	39.36	38.42	40.69	40.77	39.00	39.21	36.89	49.34	48.71
CaO	0.62	0.26	0.41	0.19	0.44	0.37	0.43	0.36	0.11	0.06
Na_2O	0.01	0.02	0.01	0.00	0.02	0.01	0.02	0.03	0.01	0.04
K_2O	0.01	0.02	0.01	0.01	0.02	0.01	0.00	0.02	0.03	0.01
NiO	0.12	0.15	0.09	0.17	0.09	0.11	0.09	0.11	0.33	0.39
Total	**100.58**	**100.59**	**99.95**	**100.41**	**100.26**	**100.28**	**100.33**	**100.83**	**100.63**	**100.23**
Si	0.991	0.994	0.992	0.989	0.990	0.991	0.985	0.998	0.989	0.993
Al	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.000	0.001	0.006
Ti	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.001
Fe^{2+}	0.512	0.471	0.492	0.442	0.431	0.481	0.483	0.538	0.208	0.208
Mn	0.011	0.009	0.010	0.008	0.008	0.010	0.009	0.012	0.003	0.003
Mg	1.468	1.517	1.497	1.561	1.564	1.511	1.520	1.437	1.799	1.782
Ca	0.017	0.007	0.011	0.005	0.012	0.010	0.012	0.010	0.003	0.002
Na	0.001	0.001	0.000	0.000	0.001	0.001	0.001	0.002	0.000	0.002
K	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.000
Ni	0.003	0.003	0.002	0.003	0.002	0.002	0.002	0.002	0.006	0.008
Σ cations	**3.005**	**3.004**	**3.006**	**3.009**	**3.011**	**3.007**	**3.014**	**3.001**	**3.010**	**3.005**
Fo[3]	74.14	76.31	75.26	77.93	78.40	75.85	75.89	72.76	89.64	89.55

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Fo = 100*Mg/(Mg+Fe). Fo = forsterite.

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Table A3. Major element concentrations of olivine from the investigated dikes. Structural formula calculated on the basis of 4 oxygens.

Dike	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F
Crystal[1]	2mc	2mc	2mc	3mic	3mic	4mc	4mc	5mc	5mc	6mc
Location[2]	B	N	NI	N	N2	B	N	B	N	B
Type	1	1	1	1	1	1	1	1	1	1
SiO_2	38.14	39.89	40.39	38.97	38.62	38.53	39.86	38.17	40.01	35.49
TiO_2	0.05	0.00				0.04	0.01	0.02	0.07	0.06
Al_2O_3	0.05	0.01	0.05	0.02	0.08	0.04	0.08	0.04	0.04	0.06
Cr_2O_3	0.01	0.03	0.06		0.05		0.03		0.07	0.01
FeO	24.54	12.02	12.87	18.75	19.23	19.82	13.53	21.22	13.47	22.34
MnO	0.50	0.17	0.17	0.31	0.32	0.38	0.19	0.42	0.19	0.49
MgO	37.09	47.45	47.02	42.48	41.99	41.55	46.72	40.48	46.61	35.47
CaO	0.33	0.11	0.13	0.30	0.26	0.32	0.22	0.37	0.23	3.94
Na_2O	0.02	0.01	0.02		0.02	0.03	0.03	0.01	0.02	0.02
K_2O		0.02			0.02		0.01		0.02	0.00
NiO	0.09	0.34	0.29	0.14	0.14	0.14	0.30	0.12	0.26	0.12
Total	**100.82**	**100.05**	**100.99**	**100.96**	**100.72**	**100.85**	**100.97**	**100.85**	**100.98**	**98.01**
Si	0.996	0.990	0.995	0.989	0.985	0.985	0.987	0.983	0.990	0.962
Al	0.001	0.000	0.001	0.000	0.002	0.001	0.002	0.001	0.001	0.002
Ti	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001
Fe^{2+}	0.536	0.249	0.265	0.398	0.410	0.424	0.280	0.457	0.279	0.507
Mn	0.011	0.003	0.004	0.007	0.007	0.008	0.004	0.009	0.004	0.011
Mg	1.444	1.755	1.727	1.607	1.597	1.583	1.725	1.553	1.719	1.434
Ca	0.009	0.003	0.003	0.008	0.007	0.009	0.006	0.010	0.006	0.114
Na	0.001	0.000	0.001	0.000	0.001	0.002	0.001	0.000	0.001	0.001
K	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
Ni	0.002	0.007	0.006	0.003	0.003	0.003	0.006	0.003	0.005	0.003
Σ cations	**3.001**	**3.008**	**3.002**	**3.012**	**3.013**	**3.016**	**3.011**	**3.016**	**3.006**	**3.035**
Fo[3]	72.93	87.57	86.70	80.15	79.57	78.87	86.03	77.26	86.04	73.88

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Fo = 100*Mg/(Mg+Fe). Fo = forsterite.

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Table A3. Major element concentrations of olivine from the investigated dikes. Structural formula calculated on the basis of 4 oxygens.

Dike	MT-74F	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E
Crystal[1]	6mc	1mc	1mc	2mc	2mc	3mc	3mc	4mc	5mc	6mc
Location[2]	N	IB	N	B	N	B	N	N	N	B
Type	1	2	2	2	2	2	2	2	2	2
SiO_2	39.53	39.95	39.87	40.10	39.83	39.99	40.37	39.75	39.90	40.27
TiO_2		0.09	0.01	0.00	0.01			0.03		0.04
Al_2O_3	0.08	0.07	0.07	0.07	0.05	0.03	0.04	0.05	0.06	0.05
Cr_2O_3	0.00	0.04	0.01	0.06	0.06	0.03	0.05	0.04	0.02	0.09
FeO	15.96	11.76	12.82	11.84	12.14	13.02	11.55	12.35	11.48	13.13
MnO	0.17	0.15	0.20	0.15	0.19	0.21	0.17	0.20	0.17	0.21
MgO	45.28	47.38	46.30	46.96	47.28	46.03	47.76	46.67	47.40	46.22
CaO	0.18	0.27	0.21	0.26	0.19	0.40	0.23	0.39	0.25	0.41
Na_2O	0.01	0.03		0.01		0.03		0.02	0.02	0.00
K_2O	0.04	0.01	0.00			0.03				0.00
NiO	0.11	0.31	0.20	0.30	0.26	0.21	0.29	0.23	0.26	0.19
Total	**101.36**	**100.07**	**99.68**	**99.76**	**100.01**	**99.99**	**100.46**	**99.72**	**99.56**	**100.62**
Si	0.985	0.990	0.996	0.996	0.989	0.997	0.995	0.991	0.992	0.998
Al	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.002	0.002	0.002
Ti	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Fe^{2+}	0.333	0.244	0.268	0.246	0.252	0.272	0.238	0.258	0.239	0.272
Mn	0.004	0.003	0.004	0.003	0.004	0.004	0.004	0.004	0.004	0.004
Mg	1.682	1.751	1.724	1.740	1.751	1.711	1.754	1.735	1.757	1.707
Ca	0.005	0.007	0.005	0.007	0.005	0.011	0.006	0.010	0.007	0.011
Na	0.000	0.002	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.000
K	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000
Ni	0.002	0.006	0.004	0.006	0.005	0.004	0.006	0.005	0.005	0.004
Σ cations	**3.014**	**3.007**	**3.003**	**3.000**	**3.008**	**3.002**	**3.004**	**3.006**	**3.007**	**2.999**
Fo[3]	83.47	87.77	86.55	87.61	87.42	86.28	88.05	87.05	88.03	86.26

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Fo = 100*Mg/(Mg+Fe). Fo = forsterite.

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Table A3. Major element concentrations of olivine from the investigated dikes. Structural formula calculated on the basis of 4 oxygens.

Dike	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-73C	MT-73C
Crystal[1]	6mc	7mic	7mic	8mc	9mc	9mc	9mc	9mc	1mc	1mc
Location[2]	N	N	N2	B	N	B	B2	N	B	N
Type	2	2	2	2	2	2	2	2	2	2
SiO_2	39.42	40.04	39.57	39.34	40.20	39.25	40.08	39.61	40.32	40.58
TiO_2	0.06	0.04	0.04	0.03	0.02	0.05		0.04	0.04	0.04
Al_2O_3	0.07	0.07	0.05	0.06	0.03	0.05	0.07	0.06	0.04	0.06
Cr_2O_3	0.02	0.02	0.07	0.01	0.07	0.04	0.03	0.10	0.09	0.07
FeO	14.74	12.48	13.54	15.18	11.43	13.75	13.55	12.32	11.83	12.17
MnO	0.21	0.17	0.21	0.49	0.16	0.22	0.22	0.19	0.17	0.18
MgO	44.94	46.77	46.36	44.65	47.82	46.20	45.07	47.06	47.57	46.47
CaO	0.48	0.28	0.30	0.32	0.28	0.43	0.43	0.37	0.26	0.18
Na_2O		0.01		0.00	0.03	0.03	0.01	0.02	0.01	0.01
K_2O	0.03			0.02		0.01	0.01	0.02		
NiO	0.05	0.19	0.15	0.23	0.25	0.16	0.22	0.22	0.31	0.25
Total	**100.02**	**100.06**	**100.30**	**100.33**	**100.29**	**100.17**	**99.69**	**100.00**	**100.64**	**100.01**
Si	0.991	0.995	0.987	0.989	0.992	0.982	1.004	0.986	0.993	1.006
Al	0.002	0.002	0.002	0.002	0.001	0.001	0.002	0.002	0.001	0.002
Ti	0.001	0.001	0.001	0.001	0.000	0.001	0.000	0.001	0.001	0.001
Fe^{2+}	0.310	0.259	0.282	0.319	0.236	0.288	0.284	0.256	0.244	0.252
Mn	0.005	0.004	0.005	0.010	0.003	0.005	0.005	0.004	0.004	0.004
Mg	1.684	1.732	1.723	1.674	1.759	1.723	1.683	1.746	1.747	1.717
Ca	0.013	0.007	0.008	0.009	0.007	0.011	0.012	0.010	0.007	0.005
Na	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.000	0.000
K	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
Ni	0.001	0.004	0.003	0.005	0.005	0.003	0.004	0.004	0.006	0.005
Σ cations	**3.008**	**3.004**	**3.011**	**3.010**	**3.004**	**3.015**	**2.995**	**3.010**	**3.003**	**2.992**
Fo[3]	84.45	86.99	85.94	83.99	88.17	85.68	85.56	87.21	84.65	87.65

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Fo = 100*Mg/(Mg+Fe). Fo = forsterite.

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Table A3. Major element concentrations of olivine from the investigated dikes. Structural formula calculated on the basis of 4 oxygens.

Dike	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C
Crystal[1]	1mc	2mc	2mc	2mc	2mc	3mc	3mc	3mc	3mc	4mc
Location[2]	N2	B	B2	I	N	B	I	N	N2	B
Type	2	2	2	2	2	2	2	2	2	2
SiO_2	40.42	38.83	38.63	39.45	39.89	40.30	39.94	40.28	40.09	39.79
TiO_2	0.01	0.02	0.05		0.05	0.05	0.01	0.03		
Al_2O_3	0.04	0.03	0.02	0.04	0.03	0.05	0.04	0.06	0.05	0.04
Cr_2O_3	0.07			0.01	0.05	0.03	0.04	0.07	0.10	0.08
FeO	12.19	18.34	18.96	15.31	12.31	12.03	11.90	11.67	11.83	12.78
MnO	0.18	0.33	0.35	0.26	0.15	0.16	0.15	0.17	0.21	0.21
MgO	46.90	42.29	41.93	44.53	47.14	47.15	47.71	47.36	47.51	46.50
CaO	0.16	0.27	0.29	0.22	0.22	0.28	0.27	0.27	0.28	0.37
Na_2O	0.03	0.00	0.03	0.01		0.03	0.01	0.03	0.02	0.01
K_2O	0.01					0.02			0.02	0.00
NiO	0.28	0.17	0.11	0.25	0.32	0.26	0.28	0.26	0.25	0.21
Total	**100.29**	**100.28**	**100.37**	**100.09**	**100.16**	**100.34**	**100.35**	**100.19**	**100.35**	**100.00**
Si	1.000	0.990	0.988	0.993	0.990	0.996	0.988	0.996	0.991	0.992
Al	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001
Ti	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.000	0.000	0.000
Fe^{2+}	0.252	0.391	0.405	0.322	0.256	0.249	0.246	0.241	0.245	0.266
Mn	0.004	0.007	0.008	0.006	0.003	0.003	0.003	0.003	0.004	0.005
Mg	1.729	1.608	1.598	1.672	1.744	1.738	1.759	1.745	1.751	1.727
Ca	0.004	0.007	0.008	0.006	0.006	0.007	0.007	0.007	0.007	0.010
Na	0.001	0.000	0.001	0.001	0.000	0.001	0.000	0.001	0.001	0.000
K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ni	0.006	0.003	0.002	0.005	0.006	0.005	0.006	0.005	0.005	0.004
Σ cations	**2.997**	**3.007**	**3.012**	**3.006**	**3.007**	**3.001**	**3.010**	**3.000**	**3.005**	**3.005**
Fo[3]	87.69	80.57	81.19	87.74	87.20	87.28	80.44	79.78	83.85	87.20

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Fo = 100*Mg/(Mg+Fe). Fo = forsterite.

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Table A3. Major element concentrations of olivine from the investigated dikes. Structural formula calculated on the basis of 4 oxygens.

Dike	MT-73C	MT-73C	MT-73C	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F
Crystal[1]	4mc	5mc	5mc	1mc	1mc	1mc	2mc	2mc
Location[2]	N	B	N	B	N	N2	B	N
Type	2	2	2	2	2	2	2	2
SiO_2	39.79	39.51	39.99	39.96	40.01	40.14	38.73	38.93
TiO_2	0.09	0.01		0.07	0.03	0.03	0.05	0.04
Al_2O_3	0.04	0.07	0.02	0.01	0.04	0.02	0.07	0.05
Cr_2O_3	0.02	0.03	0.03	0.05	0.03	0.08		
FeO	12.50	12.59	12.59	14.53	11.82	11.94	18.17	17.68
MnO	0.20	0.20	0.17	0.25	0.14	0.19	0.35	0.33
MgO	46.36	47.63	47.13	44.95	47.07	47.66	42.27	42.84
CaO	0.30	0.32	0.32	0.23	0.19	0.20	0.32	0.31
Na_2O			0.01	0.03	0.02		0.01	0.02
K_2O							0.03	
NiO	0.20	0.21	0.23	0.22	0.26	0.26	0.13	0.13
Total	**99.51**	**100.58**	**100.50**	**100.31**	**99.61**	**100.52**	**100.15**	**100.33**
Si	0.995	0.979	0.990	0.999	0.995	0.991	0.989	0.989
Al	0.001	0.002	0.001	0.000	0.001	0.001	0.002	0.002
Ti	0.002	0.000	0.000	0.001	0.001	0.001	0.001	0.001
Fe^{2+}	0.261	0.261	0.261	0.304	0.246	0.246	0.388	0.376
Mn	0.004	0.004	0.004	0.005	0.003	0.004	0.008	0.007
Mg	1.727	1.760	1.740	1.676	1.746	1.753	1.609	1.623
Ca	0.008	0.009	0.009	0.006	0.005	0.005	0.009	0.008
Na	0.000	0.000	0.001	0.002	0.001	0.000	0.001	0.001
K	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
Ni	0.004	0.004	0.005	0.004	0.005	0.005	0.003	0.003
Σ cations	**3.002**	**3.019**	**3.011**	**2.997**	**3.003**	**3.006**	**3.011**	**3.010**
Fo[3]	87.47	87.73	86.96	87.87	87.73	86.65	86.87	87.09

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Fo = 100*Mg/(Mg+Fe). Fo = forsterite.

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Table A4. Trace element concentrations (in ppm) of olivine from the investigated dikes.

Dike	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74E2	MT-74E2
Crystal[1]	1mc	1mc	1mc	2mc	2mc	3mic	4mc	5mc	1mc	1mc
Location[2]	NI	N	B	N	B	N	N	N	IB	N
Type	1	1	1	1	1	1	1	1	2	2
Fo	89.5	89.6	72.8	87.6	72.9	80.1	86	86	87.8	86.5
Li	1.98	1.64	5.87	1.72	6.07	3.45	5.02	2.75	1.37	1.55
Na	170	146	146	152	128	136	207	192	165	197
Al	214	221	229	170	179	250	311	279	288	277
P	49.6	77.2	95.1	119	125	200	235	237	65.6	55.4
Ca	450	852	1126	797	1262	1730	1449	1207	1535	1253
Sc	3	2.88	3.44	3	3.4	4.03	3.82	3.81	4.06	3.22
Ti	23.3	18.9	40.2	34.9	77.9	97	82.5	75.1	61.6	114
V	4.51	4.24	4.54	4.02	3.55	3.66	4.9	5.23	3.24	3.76
Cr	101	73.9	173	188	107	128	223	220	256	135
Mn	887	829	1163	944	1635	1699	1327	1190	1011	1095
Co	125	118	115	121	134	151	135	131	123	130
Ni	2483	2446	1978	2249	1329	952	1749	1587	1720	1250
Cu	1.85	1.55	0.438	0.672	0.24	0.33	1.88	0.89	1.61	1.73
Zn	56.5	51.7	95	83.4	152	128	115	95.9	73	73.3
Sr	b.d.	b.d.	0.523	0.019	b.d.	0.018	0.047	0.017	0.015	b.d.
Y	0.03	0.098	0.121	0.051	0.176	0.128	0.1	0.064	0.099	0.086
Zr	0.076	b.d.	0.134	0.063	0.032	0.05	0.095	0.024	b.d.	0.081
Nb	b.d.	b.d.	0.023	0.011	b.d.	b.d.	0.072	b.d.	0.012	b.d.
La	b.d.	b.d.	0.034	b.d.	0.027	b.d.	b.d.	b.d.	b.d.	b.d.
Ce	b.d.	b.d.	0.058	b.d.	0.017	b.d.	b.d.	b.d.	b.d.	b.d.
Nd	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	0.2	0.09	b.d.	b.d.
Gd	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Yb	b.d.	0.111	b.d.	0.164	b.d.	0.08	b.d.	0.176	b.d.	b.d.

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Table A4. Trace element concentrations (in ppm) of olivine from the investigated dikes.

Dike	MT-74E2	MT-74E2	MT-74E2	MT-74E2	MT-74E2	MT-73C	MT-73C	MT-68F	MT-68F	MT-68F
Crystal[1]	3mc	3mc	6mc	8mc	8mc	2mc	2mc	1mc	1mc	2mc
Location[2]	N	B	N	N	B	N	B	N2	N	N
Type	2	2	2	2	2	2	2	2	2	2
Fo	88.1	86.3	84.5	88.2	84	87.2	80.6	86.7	87.7	87.1
Li	1.8	1.65	2.43	5.89	5.11	84.34	49.97	2.54	3.22	2.42
Na	214	185	194	169	175	5864	3558	231	194	261
Al	388	311	315	476	275	8715	6549	256	186	270
P	286	50.8	276	150	64.1	3644	2533	169	211	194
Ca	1766	1364	2383	1361	1502	35735	35735	1278	1779	1780
Sc	3.89	4.04	4.64	4.11	3.57	179	108	3.43	3.45	3.51
Ti	102	64.2	111	202	89.8	3234	1464	91.8	132	92
V	4.06	3.5	2.76	4.26	2.95	192.83	143.11	4.24	3.01	4.78
Cr	291	267	229	372	250	11033	10113	360	17.3	411
Mn	960	1032	1155	1011	1243	59612	36070	1076	2130	1098
Co	128	133	132	123	121	7344	4267	137	176	142
Ni	1872	1828	1485	1961	1778	109672	74216	2098	1039	2245
Cu	2.4	1.59	1.8	0.398	0.315	b.d.	b.d.	1.58	1.12	1.33
Zn	76.8	76.4	76.1	78.2	118	4064	2575	81.2	134	83.2
Sr	0.046	0.043	b.d.	0.047	b.d.	2.75	0.74	0.062	b.d.	b.d.
Y	0.099	0.1	0.168	0.078	0.094	2.53	1.87	0.101	0.151	b.d.
Zr	0.061	b.d.	0.075	0.215	0.135	b.d.	b.d.	b.d.	b.d.	0.115
Nb	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	0.036
La	b.d.	b.d.	0.027	b.d.	b.d.	b.d.	0.58	b.d.	b.d.	b.d.
Ce	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Nd	b.d.	0.149	b.d.	b.d.	b.d.	b.d.	1.51	b.d.	b.d.	b.d.
Gd	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Yb	b.d.	b.d.	b.d.	0.22	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A
Crystal[1]	1mc	1mc	1mc	2mc	2mc	2mc	2mc	2mc	2mc	2mc
Location[2]	I	I	N	B	B2	I	I2	I3	I4	I5
Type	C	C	C	C	C	C	C	C	C	C
SiO_2	43.97	41.37	47.77	45.90	46.10	45.22	46.65	45.54	46.92	47.48
TiO_2	3.51	4.66	2.47	2.43	3.09	2.83	1.99	2.36	1.83	1.77
Al_2O_3	9.53	11.04	6.23	8.31	7.09	8.76	7.81	8.50	7.65	6.95
Cr_2O_3	0.20	0.11	0.06	0.21	0.00	0.32	0.39	0.20	0.51	0.61
$FeO_{(t)}$	7.64	8.40	6.64	7.19	7.24	7.52	6.94	7.42	6.59	6.27
MnO	0.12	0.11	0.09	0.11	0.14	0.11	0.13	0.12	0.14	0.12
MgO	11.85	10.92	13.65	12.55	12.63	12.56	13.02	12.53	13.36	13.72
CaO	22.31	22.40	22.57	22.26	22.66	22.31	22.21	22.36	22.18	22.30
Na_2O	0.59	0.53	0.39	0.62	0.59	0.54	0.51	0.54	0.56	0.50
K_2O	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.02
Total	**99.72**	**99.55**	**99.87**	**99.58**	**99.55**	**100.17**	**99.65**	**99.57**	**99.75**	**99.73**
TSi	1.641	1.555	1.770	1.707	1.720	1.675	1.732	1.695	1.736	1.756
TAl	0.359	0.445	0.230	0.293	0.280	0.325	0.268	0.305	0.264	0.244
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.060	0.044	0.042	0.071	0.032	0.057	0.073	0.067	0.069	0.059
M1Ti	0.099	0.132	0.069	0.068	0.087	0.079	0.056	0.066	0.051	0.049
$M1Fe^{3+}$	0.138	0.171	0.075	0.123	0.117	0.138	0.109	0.138	0.117	0.105
$M1Fe^{2+}$	0.039	0.038	0.058	0.036	0.062	0.023	0.031	0.028	0.011	0.013
M1Cr	0.006	0.003	0.002	0.006	0.000	0.009	0.012	0.006	0.015	0.018
M1Mg	0.659	0.612	0.754	0.696	0.703	0.694	0.720	0.695	0.737	0.756
ΣM1	**1.001**	**1.000**	**1.000**	**1.000**	**1.001**	**1.000**	**1.001**	**1.000**	**1.000**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.062	0.055	0.073	0.065	0.047	0.072	0.076	0.065	0.076	0.076
M2Mn	0.004	0.004	0.003	0.003	0.004	0.003	0.004	0.004	0.005	0.004
M2Ca	0.892	0.902	0.896	0.887	0.906	0.885	0.883	0.892	0.879	0.884
M2Na	0.042	0.039	0.028	0.045	0.043	0.039	0.037	0.039	0.040	0.036
M2K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
ΣM2	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**0.999**	**1.000**	**1.000**	**1.000**	**1.001**
Cations	**4.001**	**4.000**	**4.000**	**4.000**	**4.001**	**3.999**	**4.001**	**4.000**	**4.000**	**4.001**
Mg#[3]	73.39	69.86	78.54	75.65	75.67	74.87	76.92	75.05	78.32	79.58
Adjectival modifiers Name	subsilicic diopside	titanian subsilicic diopside	diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	chromian subsilicic diopside	subsilicic diopside	chromian subsilicic diopside	chromian diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A
Crystal[1]	2mc	2mc	2mc	3mc	3mc	3mc	3mc	3mc	3mc	3mc
Location[2]	I6	N2	N	B	B2	B3	I	I	I2	I2
Type	C	C	C	C	C	C	C	C	C	C
SiO_2	47.54	43.43	41.30	46.79	45.80	44.53	49.20	44.66	46.91	44.28
TiO_2	1.91	3.88	4.30	2.80	3.22	3.22	2.00	3.35	2.23	3.13
Al_2O_3	6.66	10.22	10.97	6.70	7.24	9.11	4.78	8.67	7.34	8.94
Cr_2O_3	0.40	0.00	0.07	0.00	0.00	0.15	0.40	0.00	0.48	0.11
$FeO_{(t)}$	6.30	7.97	9.38	7.16	7.53	7.48	5.96	8.26	6.62	8.26
MnO	0.11	0.10	0.15	0.15	0.15	0.12	0.12	0.14	0.13	0.13
MgO	13.59	11.37	10.78	12.87	12.23	12.08	14.70	12.06	13.37	12.11
CaO	22.78	22.08	21.27	22.58	22.36	22.35	22.32	21.94	22.15	21.71
Na_2O	0.50	0.58	0.71	0.57	0.73	0.61	0.41	0.59	0.52	0.57
K_2O	0.01	0.01	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00
Total	**99.80**	**99.65**	**98.92**	**99.61**	**99.30**	**99.65**	**99.89**	**99.69**	**99.74**	**99.23**
TSi	1.758	1.625	1.563	1.743	1.715	1.660	1.816	1.668	1.739	1.660
TAl	0.242	0.375	0.437	0.257	0.285	0.340	0.184	0.332	0.261	0.340
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.048	0.076	0.052	0.037	0.034	0.060	0.024	0.050	0.059	0.055
M1Ti	0.053	0.109	0.122	0.078	0.091	0.090	0.056	0.094	0.062	0.088
$M1Fe^{3+}$	0.111	0.122	0.189	0.103	0.123	0.138	0.066	0.135	0.100	0.145
$M1Fe^{2+}$	0.027	0.059	0.027	0.067	0.069	0.036	0.034	0.049	0.026	0.032
M1Cr	0.012	0.000	0.002	0.000	0.000	0.004	0.012	0.000	0.014	0.003
M1Mg	0.749	0.634	0.608	0.715	0.683	0.671	0.809	0.672	0.739	0.677
ΣM1	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**0.999**	**1.001**	**1.000**	**1.000**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.057	0.069	0.081	0.053	0.044	0.059	0.084	0.074	0.079	0.083
M2Mn	0.003	0.003	0.005	0.005	0.005	0.004	0.004	0.005	0.004	0.004
M2Ca	0.903	0.885	0.862	0.901	0.897	0.893	0.883	0.878	0.880	0.872
M2Na	0.036	0.042	0.052	0.041	0.053	0.044	0.030	0.042	0.037	0.041
M2K	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000
ΣM2	**0.999**	**0.999**	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**	**1.000**	**1.000**	**1.000**
Cations	**3.999**	**3.999**	**4.000**	**4.000**	**4.000**	**3.999**	**4.002**	**4.000**	**4.000**	**4.000**
Mg#[3]	79.34	71.72	67.18	76.23	74.32	74.23	81.47	72.26	78.28	72.25
Adjectival modifiers Name	chromian diopside	titanian subsilicic diopside	titanian subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	chromian diopside	subsilicic diopside	chromian subsilicic diopside	subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A
Crystal[1]	3mc	3mc	3mc	4mc	4mc	4mc	4mc	4mc	4mc	4mc
Location[2]	N	N2	N3	B	B2	I	IB	N	N2	NI
Type	C	C	C	C	C	C	C	B2	B2	A2
SiO_2	48.14	49.22	48.32	44.63	44.73	44.96	44.46	49.83	50.56	49.45
TiO_2	2.08	2.00	2.95	3.72	3.70	2.68	3.86	0.61	0.58	1.00
Al_2O_3	5.46	4.69	5.32	7.72	7.73	8.53	8.29	5.38	4.67	5.69
Cr_2O_3	0.01	0.41	0.01	0.00	0.03	0.08	0.02	0.02	0.01	0.58
$FeO_{(t)}$	7.40	6.22	7.57	7.44	7.77	7.28	7.91	9.90	9.20	5.33
MnO	0.12	0.13	0.15	0.14	0.17	0.11	0.16	0.14	0.12	0.11
MgO	14.05	14.73	13.93	12.12	11.81	12.30	11.63	12.08	12.51	14.59
CaO	22.29	22.51	22.02	22.41	22.08	22.39	22.59	20.23	21.40	21.64
Na_2O	0.50	0.42	0.45	0.71	0.82	0.47	0.69	1.00	1.00	0.66
K_2O	0.00	0.01	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00
Total	**100.05**	**100.34**	**100.73**	**98.90**	**98.86**	**98.80**	**99.61**	**99.19**	**100.05**	**99.05**
TSi	1.779	1.810	1.781	1.679	1.685	1.689	1.666	1.869	1.876	1.829
TAl	0.221	0.190	0.219	0.321	0.315	0.311	0.334	0.131	0.124	0.171
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.017	0.013	0.012	0.021	0.028	0.066	0.031	0.106	0.080	0.077
M1Ti	0.058	0.055	0.082	0.105	0.105	0.076	0.109	0.017	0.016	0.028
$M1Fe^{3+}$	0.123	0.085	0.074	0.141	0.135	0.124	0.134	0.062	0.083	0.067
$M1Fe^{2+}$	0.028	0.028	0.066	0.053	0.067	0.043	0.076	0.139	0.129	0.006
M1Cr	0.000	0.012	0.000	0.000	0.001	0.002	0.000	0.000	0.000	0.017
M1Mg	0.774	0.807	0.766	0.680	0.663	0.689	0.650	0.675	0.692	0.805
ΣM1	**1.000**	**1.000**	**1.000**	**1.000**	**0.999**	**1.000**	**1.000**	**0.999**	**1.000**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.078	0.079	0.093	0.040	0.042	0.062	0.038	0.110	0.074	0.092
M2Mn	0.004	0.004	0.005	0.004	0.005	0.003	0.005	0.004	0.004	0.004
M2Ca	0.883	0.887	0.870	0.903	0.891	0.901	0.907	0.813	0.851	0.858
M2Na	0.036	0.030	0.032	0.052	0.060	0.034	0.050	0.073	0.072	0.047
M2K	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
ΣM2	**1.001**	**1.000**	**1.000**	**0.999**	**0.999**	**1.000**	**1.000**	**1.000**	**1.001**	**1.001**
Cations	**4.001**	**4.000**	**4.000**	**3.999**	**3.998**	**4.000**	**4.000**	**3.999**	**4.001**	**4.001**
Mg#[3]	77.17	80.78	76.68	74.40	73.10	75.05	72.38	68.46	70.76	82.99
Adjectival modifiers Name	diopside	chromian diopside	diopside	titanian subsilicic diopside	titanian subsilicic diopside	subsilicic diopside	titanian subsilicic diopside	ferroan portador de diopside	diopside	chromian diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A
Crystal[1]	4mc	4mc	5mc	5mc	5mc	5mc	5mc	5mc	5mc	5mc
Location[2]	NI	NI2	B	B2	I	I	I	I2	I2	N
Type	C	C	C	C	A2	C	C	A2	C	B1
SiO_2	45.32	44.01	45.62	47.29	48.88	47.15	45.45	48.26	47.03	51.10
TiO_2	2.67	3.17	3.45	2.46	1.00	2.27	2.83	1.65	2.32	0.39
Al_2O_3	8.02	9.54	7.67	5.93	6.53	6.58	8.58	6.66	6.44	3.45
Cr_2O_3	0.13	0.01	0.00	0.00	0.92	0.00	0.08	1.02	0.01	0.07
$FeO_{(t)}$	7.36	7.44	7.38	7.21	5.31	7.46	7.30	5.48	7.33	11.33
MnO	0.11	0.11	0.12	0.15	0.12	0.13	0.09	0.08	0.13	0.26
MgO	12.78	11.84	12.30	13.59	14.49	13.06	12.28	14.25	13.38	11.72
CaO	22.41	22.55	22.63	22.54	22.10	22.42	22.34	21.81	22.22	20.82
Na_2O	0.49	0.55	0.60	0.53	0.68	0.47	0.55	0.66	0.45	0.93
K_2O	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.01
Total	**99.28**	**99.22**	**99.78**	**99.70**	**100.02**	**99.56**	**99.50**	**99.87**	**99.31**	**100.08**
TSi	1.692	1.648	1.701	1.756	1.791	1.756	1.695	1.776	1.754	1.914
TAl	0.308	0.352	0.299	0.244	0.209	0.244	0.305	0.224	0.246	0.086
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.045	0.069	0.038	0.016	0.073	0.045	0.072	0.065	0.037	0.066
M1Ti	0.075	0.089	0.097	0.069	0.028	0.064	0.079	0.046	0.065	0.011
$M1Fe^{3+}$	0.143	0.143	0.111	0.128	0.102	0.106	0.110	0.084	0.109	0.064
$M1Fe^{2+}$	0.022	0.038	0.071	0.036	0.000	0.060	0.053	0.000	0.044	0.202
M1Cr	0.004	0.000	0.000	0.000	0.027	0.000	0.002	0.030	0.000	0.002
M1Mg	0.711	0.661	0.684	0.752	0.771	0.725	0.683	0.776	0.744	0.654
ΣM1	**1.000**	**1.000**	**1.001**	**1.001**	**1.001**	**1.000**	**0.999**	**1.001**	**0.999**	**0.999**
M2Mg	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.006	0.000	0.000
$M2Fe^{2+}$	0.065	0.052	0.048	0.061	0.061	0.066	0.064	0.085	0.076	0.088
M2Mn	0.003	0.003	0.004	0.005	0.004	0.004	0.003	0.003	0.004	0.008
M2Ca	0.897	0.905	0.904	0.897	0.868	0.895	0.893	0.860	0.888	0.835
M2Na	0.035	0.040	0.044	0.038	0.048	0.034	0.040	0.047	0.032	0.068
M2K	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000
ΣM2	**1.000**	**1.000**	**1.000**	**1.001**	**1.001**	**1.000**	**1.000**	**1.001**	**1.000**	**0.999**
Cations	**4.000**	**4.000**	**4.001**	**4.002**	**4.002**	**4.000**	**3.999**	**4.002**	**3.999**	**3.998**
Mg#[3]	75.56	73.94	74.84	76.97	82.91	75.76	75.05	82.23	76.46	64.88
Adjectival modifiers Name	subsilicic diopside	subsilicic diopside	subsilicic diopside	diopside	chromian diopside	diopside	subsilicic diopside	chromian diopside	diopside	diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A
Crystal[1]	6mic	6mic	6mic	6mic	7mic	7mic	8mc	8mc	8mc	8mc
Location[2]	B	I	IB	N	IB	N	B	I	IB	N
Type	C	C	C	C	C	C	C	A2	C	A1
SiO_2	45.75	46.01	44.60	47.47	47.01	46.78	42.40	47.81	45.50	53.39
TiO_2	3.12	2.55	3.42	1.74	2.81	2.80	4.46	2.00	2.72	0.19
Al_2O_3	7.19	7.90	8.32	8.00	5.92	7.02	10.13	7.60	8.43	2.03
Cr_2O_3	0.00	0.11	0.00	0.52	0.00	0.05	0.00	0.53	0.14	0.75
$FeO_{(t)}$	7.20	7.05	7.78	6.34	7.06	7.33	8.16	5.73	7.26	3.98
MnO	0.12	0.10	0.11	0.14	0.16	0.13	0.13	0.11	0.11	0.12
MgO	12.64	12.83	11.94	13.62	13.33	12.94	10.79	13.91	12.43	16.66
CaO	22.67	22.60	22.49	21.25	22.64	22.32	22.08	21.53	22.16	21.86
Na_2O	0.61	0.58	0.62	0.77	0.64	0.59	0.64	0.69	0.56	0.68
K_2O	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total	**99.29**	**99.74**	**99.28**	**99.87**	**99.58**	**99.97**	**98.79**	**99.92**	**99.31**	**99.66**
TSi	1.710	1.708	1.672	1.748	1.749	1.736	1.606	1.759	1.699	1.950
TAl	0.290	0.292	0.328	0.252	0.251	0.264	0.394	0.241	0.301	0.050
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.027	0.053	0.040	0.095	0.008	0.043	0.058	0.088	0.070	0.037
M1Ti	0.088	0.071	0.096	0.048	0.079	0.078	0.127	0.055	0.076	0.005
$M1Fe^{3+}$	0.130	0.135	0.139	0.100	0.132	0.106	0.128	0.075	0.113	0.028
$M1Fe^{2+}$	0.051	0.028	0.057	0.000	0.042	0.056	0.078	0.003	0.044	0.000
M1Cr	0.000	0.003	0.000	0.015	0.000	0.001	0.000	0.015	0.004	0.022
M1Mg	0.704	0.710	0.667	0.742	0.739	0.716	0.609	0.763	0.692	0.907
ΣM1	**1.000**	**1.000**	**0.999**	**1.000**	**1.000**	**1.000**	**1.000**	**0.999**	**0.999**	**0.999**
M2Mg	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.044	0.056	0.048	0.095	0.046	0.065	0.053	0.098	0.069	0.093
M2Mn	0.004	0.003	0.003	0.004	0.005	0.004	0.004	0.003	0.004	0.004
M2Ca	0.908	0.899	0.904	0.838	0.902	0.887	0.896	0.849	0.887	0.855
M2Na	0.044	0.042	0.045	0.055	0.046	0.043	0.047	0.049	0.040	0.048
M2K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣM2	**1.000**	**1.000**	**1.000**	**0.998**	**0.999**	**0.999**	**1.000**	**0.999**	**1.000**	**1.000**
Cations	**4.000**	**4.000**	**3.999**	**3.998**	**3.999**	**3.999**	**4.000**	**3.998**	**3.999**	**3.999**
Mg#[3]	75.78	76.43	73.22	79.32	77.06	75.93	70.16	81.26	75.38	88.23
Adjectival modifiers				chromian			titanian			
Name	subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	chromian diopside	subsilicic diopside	chromian diopside

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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-74F
Crystal[1]	8mc	9mc	9mc	9mc	9mc	10mic	10mic	10mic	10mic	1mc
Location[2]	NI	B	I	IB	N	B	I	N	NI	B
Type	A1	C	A2	C	A1	C	C	C	C	C
SiO_2	53.17	45.09	48.58	45.84	53.98	45.46	46.37	51.73	49.56	45.76
TiO_2	0.23	3.08	2.00	2.60	0.07	3.33	2.12	0.32	1.20	2.52
Al_2O_3	2.09	8.73	7.20	8.31	1.58	7.38	8.70	3.46	5.25	8.45
Cr_2O_3	0.70	0.14	0.53	0.16	0.23	0.00	0.12	0.01	0.25	0.16
$FeO_{(t)}$	3.92	7.58	5.77	7.07	4.32	7.56	6.87	7.43	5.94	7.09
MnO	0.12	0.13	0.11	0.12	0.15	0.19	0.12	0.17	0.11	0.09
MgO	16.48	12.10	13.98	12.58	16.84	11.93	12.89	13.98	15.45	12.41
CaO	22.11	22.40	21.72	22.16	22.79	22.37	21.33	21.50	21.32	22.25
Na_2O	0.68	0.61	0.75	0.57	0.54	0.79	0.81	0.93	0.62	0.56
K_2O	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.02	0.00	0.00
Total	**99.52**	**99.86**	**100.66**	**99.43**	**100.51**	**99.01**	**99.33**	**99.54**	**99.69**	**99.29**
TSi	1.945	1.678	1.775	1.708	1.956	1.709	1.721	1.914	1.819	1.708
TAl	0.055	0.322	0.225	0.292	0.044	0.291	0.279	0.086	0.181	0.292
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.035	0.061	0.085	0.073	0.023	0.035	0.101	0.065	0.046	0.079
M1Ti	0.006	0.086	0.055	0.073	0.002	0.094	0.059	0.009	0.033	0.071
$M1Fe^{3+}$	0.034	0.127	0.068	0.109	0.048	0.124	0.113	0.069	0.105	0.106
$M1Fe^{2+}$	0.005	0.050	0.016	0.041	0.010	0.078	0.010	0.085	0.000	0.049
M1Cr	0.020	0.004	0.015	0.005	0.007	0.000	0.004	0.000	0.007	0.005
M1Mg	0.899	0.671	0.761	0.699	0.910	0.668	0.713	0.771	0.809	0.691
ΣM1	**0.999**	**0.999**	**1.000**	**1.000**	**1.000**	**0.999**	**1.000**	**0.999**	**1.000**	**1.001**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.000
$M2Fe^{2+}$	0.081	0.059	0.093	0.070	0.073	0.036	0.090	0.075	0.078	0.067
M2Mn	0.004	0.004	0.004	0.004	0.005	0.006	0.004	0.005	0.003	0.003
M2Ca	0.867	0.893	0.850	0.885	0.885	0.901	0.848	0.852	0.838	0.890
M2Na	0.049	0.044	0.053	0.041	0.038	0.058	0.058	0.066	0.044	0.041
M2K	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.000
ΣM2	**1.001**	**1.000**	**1.000**	**1.001**	**1.001**	**1.001**	**1.000**	**0.999**	**1.000**	**1.001**
Cations	**4.000**	**3.999**	**4.000**	**4.001**	**4.001**	**4.000**	**4.000**	**3.998**	**4.000**	**4.002**
Mg#[3]	88.22	73.98	81.13	76.06	87.42	73.73	77.00	77.10	82.22	75.68
Adjectival modifiers Name	chromian diopside	subsilicic diopside	chromian diopside	subsilicic diopside	diopside	subsilicic diopside	subsilicic diopside	diopside	diopside	subsilicic diopside

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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F
Crystal[1]	1mc	1mc	1mc	1mc	1mc	2mc	3mc	4mc	4mc	4mc
Location[2]	I	I2	N	NI	I	N	N	B	I	I
Type	C	C	C	C	C	C	C	C	A2	C
SiO_2	47.23	47.22	48.29	44.65	45.13	43.86	46.44	44.74	48.92	43.60
TiO_2	1.85	1.96	1.86	2.98	2.64	3.48	2.18	3.16	1.00	3.66
Al_2O_3	7.56	7.37	5.66	8.82	9.26	9.19	7.73	9.06	6.37	9.46
Cr_2O_3	0.54	0.47	0.08	0.25	0.26	0.06	0.32	0.10	0.63	0.00
$FeO_{(t)}$	6.58	6.98	6.74	7.57	7.36	7.64	7.20	7.56	5.54	8.08
MnO	0.12	0.11	0.13	0.11	0.12	0.12	0.10	0.12	0.10	0.12
MgO	13.28	13.37	14.01	12.32	12.50	11.90	13.28	11.83	14.51	11.60
CaO	21.77	22.30	21.98	22.14	21.23	22.60	22.06	22.61	21.82	22.40
Na_2O	0.58	0.45	0.52	0.53	0.60	0.48	0.56	0.63	0.69	0.54
K_2O	0.02	0.01	0.00	0.01	0.00	0.03	0.00	0.01	0.01	0.00
Total	**99.52**	**100.23**	**99.27**	**99.37**	**99.10**	**99.36**	**99.87**	**99.81**	**99.59**	**99.46**
TSi	1.752	1.743	1.795	1.669	1.687	1.643	1.719	1.667	1.799	1.635
TAl	0.248	0.257	0.205	0.331	0.313	0.357	0.281	0.333	0.201	0.365
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.083	0.063	0.043	0.057	0.094	0.049	0.056	0.064	0.075	0.052
M1Ti	0.052	0.054	0.052	0.084	0.074	0.098	0.061	0.089	0.028	0.103
$M1Fe^{3+}$	0.088	0.103	0.093	0.137	0.105	0.145	0.133	0.134	0.101	0.145
$M1Fe^{2+}$	0.028	0.030	0.034	0.028	0.022	0.042	0.008	0.053	0.000	0.051
M1Cr	0.016	0.014	0.002	0.007	0.008	0.002	0.009	0.003	0.018	0.000
M1Mg	0.734	0.736	0.776	0.686	0.696	0.665	0.733	0.657	0.778	0.648
ΣM1	**1.001**	**1.000**	**1.000**	**0.999**	**0.999**	**1.001**	**1.000**	**1.000**	**1.000**	**0.999**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000
$M2Fe^{2+}$	0.088	0.082	0.083	0.071	0.103	0.053	0.082	0.048	0.070	0.057
M2Mn	0.004	0.003	0.004	0.003	0.004	0.004	0.003	0.004	0.003	0.004
M2Ca	0.865	0.882	0.875	0.887	0.850	0.907	0.875	0.902	0.860	0.900
M2Na	0.041	0.032	0.037	0.038	0.043	0.035	0.040	0.046	0.049	0.040
M2K	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000
ΣM2	**0.999**	**0.999**	**0.999**	**0.999**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**
Cations	**4.000**	**3.999**	**3.999**	**3.998**	**3.999**	**4.001**	**4.000**	**4.000**	**4.000**	**4.000**
Mg#[3]	78.25	77.39	78.70	74.40	75.16	73.48	76.67	73.65	82.32	71.92
Adjectival modifiers Name	chromian diopside	chromian subsilicic diopside	diopside	subsilicic diopside	ferroan subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	chromian diopside	titanian subsilicic diopside

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F
Crystal[1]	4mc	5mc	5mc	5mc	5mc	5mc	6mc	6mc	6mc	6mc
Location[2]	N	B	I	I2	N	NI	B	I	I	N
Type	B1	C	C	C	B1	A2	C	A2	C	D
SiO_2	50.71	44.18	46.62	45.24	50.94	49.28	48.59	49.76	45.92	51.21
TiO_2	0.25	3.82	2.20	2.83	0.17	1.00	2.32	1.00	2.39	0.03
Al_2O_3	3.60	8.74	8.09	8.67	3.84	6.10	4.95	5.07	8.20	2.45
Cr_2O_3	0.02	0.05	0.23	0.10	0.02	0.66	0.00	0.68	0.21	0.19
$FeO_{(t)}$	12.84	7.76	6.62	7.19	11.60	5.24	6.89	5.08	6.98	24.03
MnO	0.32	0.12	0.12	0.11	0.29	0.14	0.14	0.12	0.12	0.54
MgO	10.96	11.49	13.14	12.31	11.56	14.82	13.48	15.29	12.83	21.64
CaO	19.67	22.23	21.73	22.40	20.06	21.41	22.57	22.32	22.48	0.55
Na_2O	1.40	0.66	0.64	0.56	1.00	0.62	0.59	0.56	0.54	0.04
K_2O	0.00	0.01	0.01	0.03	0.00	0.00	0.02	0.02	0.00	0.02
Total	**99.77**	**99.06**	**99.39**	**99.44**	**99.47**	**99.27**	**99.55**	**99.89**	**99.67**	**100.69**
TSi	1.908	1.664	1.731	1.688	1.918	1.817	1.808	1.823	1.705	1.901
TAl	0.092	0.336	0.269	0.312	0.082	0.183	0.192	0.177	0.295	0.099
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.068	0.051	0.085	0.068	0.089	0.082	0.025	0.042	0.063	0.008
M1Ti	0.007	0.108	0.061	0.079	0.005	0.028	0.065	0.028	0.067	0.001
$M1Fe^{3+}$	0.111	0.114	0.100	0.123	0.055	0.070	0.080	0.100	0.130	0.087
$M1Fe^{2+}$	0.199	0.079	0.020	0.042	0.202	0.000	0.082	0.000	0.024	0.000
M1Cr	0.001	0.001	0.007	0.003	0.000	0.019	0.000	0.020	0.006	0.006
M1Mg	0.615	0.645	0.727	0.685	0.649	0.801	0.748	0.811	0.710	0.899
ΣM1	**1.001**	**0.998**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**	**1.000**	**1.001**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.024	0.000	0.299
$M2Fe^{2+}$	0.095	0.051	0.086	0.060	0.108	0.092	0.052	0.055	0.063	0.659
M2Mn	0.010	0.004	0.004	0.003	0.009	0.004	0.004	0.004	0.004	0.017
M2Ca	0.793	0.897	0.864	0.895	0.809	0.846	0.900	0.876	0.894	0.022
M2Na	0.102	0.048	0.046	0.040	0.073	0.045	0.043	0.040	0.039	0.003
M2K	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.000	0.001
ΣM2	**1.000**	**1.000**	**1.000**	**0.999**	**0.999**	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**
Cations	**4.001**	**3.998**	**4.000**	**3.999**	**3.999**	**4.000**	**4.000**	**4.001**	**4.000**	**4.002**
Mg#[3]	60.29	72.55	77.92	75.27	64.00	83.40	77.75	84.34	76.59	61.63
Adjectival modifiers Name	sodian Augite	titanian subsilicic diopside	subsilicic diopside	subsilicic diopside	ferroan portador de augite	chromian diopside	diopside	chromian diopside	subsilicic diopside	Enstatite

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F
Crystal[1]	7mc	7mc	7mc	7mc	7mc	7mc	7mc	7mc	7mc	8mc
Location[2]	B	I	I	I2	I2	I3	I4	IB	N	B
Type	C	C	C	C	C	C	C	C	C	C
SiO_2	47.04	49.48	48.63	49.15	47.29	48.57	48.54	49.20	49.86	49.49
TiO_2	3.12	2.00	1.92	2.00	2.80	1.75	1.86	2.24	1.00	2.34
Al_2O_3	6.84	4.93	5.27	5.28	5.94	5.67	5.86	4.66	4.68	4.93
Cr_2O_3	0.03	0.20	0.00	0.15	0.00	0.05	0.19	0.00	0.35	0.03
$FeO_{(t)}$	7.55	6.06	6.87	6.37	7.84	6.73	6.70	7.12	6.02	7.25
MnO	0.17	0.11	0.11	0.12	0.18	0.11	0.12	0.20	0.11	0.17
MgO	12.30	14.52	14.07	14.45	13.03	14.04	14.03	13.64	14.96	13.28
CaO	22.85	22.81	22.51	22.90	22.27	22.76	22.68	22.51	22.67	22.58
Na_2O	0.71	0.46	0.42	0.50	0.61	0.46	0.51	0.63	0.45	0.57
K_2O	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.03
Total	**100.62**	**100.57**	**99.80**	**100.93**	**99.96**	**100.14**	**100.49**	**100.22**	**100.10**	**100.67**
TSi	1.740	1.814	1.801	1.796	1.759	1.790	1.783	1.819	1.830	1.826
TAl	0.260	0.186	0.199	0.204	0.241	0.210	0.217	0.181	0.170	0.174
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.038	0.027	0.030	0.023	0.019	0.036	0.036	0.022	0.032	0.040
M1Ti	0.087	0.055	0.053	0.055	0.078	0.049	0.051	0.062	0.028	0.065
$M1Fe^{3+}$	0.098	0.075	0.092	0.102	0.109	0.107	0.108	0.080	0.104	0.044
$M1Fe^{2+}$	0.098	0.044	0.048	0.029	0.072	0.035	0.030	0.084	0.007	0.119
M1Cr	0.001	0.006	0.000	0.004	0.000	0.002	0.005	0.000	0.010	0.001
M1Mg	0.678	0.794	0.777	0.787	0.722	0.771	0.768	0.752	0.818	0.730
ΣM1	**1.000**	**1.001**	**1.000**	**1.000**	**1.000**	**1.000**	**0.998**	**1.000**	**0.999**	**0.999**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.038	0.068	0.073	0.064	0.063	0.065	0.067	0.056	0.073	0.060
M2Mn	0.005	0.003	0.004	0.004	0.006	0.004	0.004	0.006	0.003	0.005
M2Ca	0.906	0.896	0.893	0.896	0.887	0.899	0.893	0.892	0.891	0.893
M2Na	0.051	0.033	0.030	0.035	0.044	0.033	0.037	0.045	0.032	0.040
M2K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001
ΣM2	**1.000**	**1.000**	**1.000**	**0.999**	**1.000**	**1.001**	**1.001**	**1.000**	**0.999**	**0.999**
Cations	**4.000**	**4.001**	**4.000**	**3.999**	**4.000**	**4.001**	**3.999**	**4.000**	**3.998**	**3.998**
Mg#[3]	74.34	80.94	78.48	80.14	74.74	78.83	78.93	77.37	81.64	76.60
Adjectival modifiers	subsilicic									
Name	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74E	MT-74E	MT-74E
Crystal[1]	8mc	8mc	8mc	8mc	8mc	8mc	8mc	1mc	1mc	1mc
Location[2]	B	I	I	I	I	I2	N	B	B2	N
Type	C	A2	C	C	C	C	C	C	C	C
SiO_2	46.80	49.87	48.19	46.47	47.15	44.06	49.21	46.06	40.53	42.25
TiO_2	2.80	1.00	2.06	2.53	2.63	3.05	1.76	2.63	4.58	3.98
Al_2O_3	6.62	5.06	5.77	8.06	6.83	9.08	5.46	7.05	11.51	10.72
Cr_2O_3	0.06	0.38	0.01	0.44	0.02	0.07	0.17	0.05	0.02	0.18
$FeO_{(t)}$	7.47	6.05	6.91	6.76	7.69	7.77	6.38	6.74	8.59	7.70
MnO	0.18	0.12	0.12	0.11	0.15	0.12	0.11	0.16	0.12	0.07
MgO	12.72	14.55	13.46	12.87	12.81	11.65	14.40	12.85	10.25	11.00
CaO	22.29	22.26	22.86	22.52	22.27	22.98	22.48	22.54	22.50	22.59
Na_2O	0.69	0.48	0.47	0.57	0.46	0.61	0.53	0.54	0.56	0.47
K_2O	0.02	0.00	0.00	0.00	0.01	0.02	0.02	0.00	0.00	0.00
Total	**99.65**	**99.77**	**99.85**	**100.33**	**100.01**	**99.41**	**100.51**	**98.63**	**98.66**	**98.96**
TSi	1.744	1.838	1.787	1.715	1.753	1.649	1.804	1.730	1.540	1.594
TAl	0.256	0.162	0.213	0.285	0.247	0.351	0.196	0.270	0.460	0.406
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.034	0.058	0.038	0.065	0.052	0.049	0.040	0.042	0.054	0.070
M1Ti	0.078	0.028	0.057	0.070	0.074	0.086	0.049	0.074	0.131	0.113
$M1Fe^{3+}$	0.113	0.071	0.093	0.106	0.080	0.172	0.092	0.117	0.183	0.137
$M1Fe^{2+}$	0.066	0.033	0.067	0.037	0.084	0.041	0.028	0.046	0.050	0.056
M1Cr	0.002	0.011	0.000	0.013	0.001	0.002	0.005	0.002	0.001	0.005
M1Mg	0.707	0.800	0.744	0.708	0.710	0.650	0.787	0.719	0.580	0.619
ΣM1	**1.000**	**1.001**	**0.999**	**0.999**	**1.001**	**1.000**	**1.001**	**1.000**	**0.999**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.054	0.083	0.054	0.065	0.075	0.030	0.076	0.048	0.039	0.050
M2Mn	0.006	0.004	0.004	0.003	0.005	0.004	0.003	0.005	0.004	0.002
M2Ca	0.890	0.879	0.908	0.891	0.887	0.921	0.883	0.907	0.916	0.913
M2Na	0.050	0.035	0.034	0.041	0.033	0.044	0.037	0.040	0.041	0.034
M2K	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000
ΣM2	**1.001**	**1.001**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**0.999**
Cations	**4.001**	**4.002**	**3.999**	**3.999**	**4.001**	**4.000**	**4.001**	**4.000**	**3.999**	**3.999**
Mg#[3]	75.21	81.05	77.66	77.29	74.82	72.79	80.06	77.31	68.08	71.81
Adjectival modifiers Name	subsilicic diopside	chromian diopside	diopside	chromian subsilicic diopside	diopside	subsilicic diopside	diopside	subsilicic diopside	titanian subsilicic diopside	titanian subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E
Crystal[1]	1mc	2mc	2mc	2mc	3mc	3mc	3mc	3mc	3mc	3mc
Location[2]	N2	I	N	NI	B	NI2	I	I2	N	NI
Type	C	C	C	C	C	B4	A4	A4	B3	B4
SiO_2	48.12	43.64	48.31	42.76	41.44	45.63	46.62	48.61	48.99	46.67
TiO_2	2.14	3.61	1.94	3.93	4.16	2.79	2.03	1.68	1.72	2.80
Al_2O_3	5.49	9.27	5.31	9.40	10.68	7.65	7.21	6.55	3.98	6.90
Cr_2O_3	0.06	0.07	0.09	0.13	0.00	0.02	0.06	1.00	0.00	0.00
$FeO_{(t)}$	6.41	8.02	6.61	7.92	8.70	10.54	6.86	5.09	11.16	8.89
MnO	0.12	0.13	0.13	0.13	0.13	0.26	0.14	0.08	0.47	0.22
MgO	13.90	11.41	13.87	11.74	9.99	10.30	12.96	14.08	10.44	11.40
CaO	23.08	22.93	22.87	22.41	22.74	21.21	22.51	22.57	20.89	21.85
Na_2O	0.38	0.52	0.46	0.62	0.70	1.44	0.77	0.47	1.83	1.00
K_2O	0.01	0.01	0.01	0.00	0.04	0.02	0.00	0.00	0.00	0.01
Total	**99.71**	**99.60**	**99.60**	**99.04**	**98.58**	**99.87**	**99.16**	**100.13**	**99.48**	**99.74**
TSi	1.784	1.635	1.792	1.609	1.576	1.711	1.735	1.787	1.845	1.747
TAl	0.216	0.365	0.208	0.391	0.424	0.289	0.265	0.213	0.155	0.253
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.024	0.045	0.024	0.025	0.054	0.049	0.051	0.071	0.022	0.051
M1Ti	0.060	0.102	0.054	0.111	0.119	0.079	0.057	0.046	0.049	0.079
$M1Fe^{3+}$	0.098	0.152	0.105	0.184	0.184	0.187	0.153	0.052	0.169	0.117
$M1Fe^{2+}$	0.049	0.063	0.047	0.017	0.077	0.109	0.018	0.029	0.175	0.117
M1Cr	0.002	0.002	0.003	0.004	0.000	0.001	0.002	0.029	0.000	0.000
M1Mg	0.768	0.637	0.767	0.658	0.566	0.576	0.719	0.772	0.586	0.636
ΣM1	**1.001**	**1.001**	**1.000**	**0.999**	**1.000**	**1.001**	**1.000**	**0.999**	**1.001**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.052	0.037	0.053	0.048	0.016	0.034	0.043	0.075	0.008	0.044
M2Mn	0.004	0.004	0.004	0.004	0.004	0.008	0.004	0.002	0.015	0.007
M2Ca	0.917	0.921	0.909	0.903	0.926	0.852	0.898	0.889	0.843	0.876
M2Na	0.027	0.038	0.033	0.045	0.051	0.105	0.055	0.034	0.134	0.073
M2K	0.000	0.000	0.000	0.000	0.002	0.001	0.000	0.000	0.000	0.000
ΣM2	**1.000**	**1.000**	**0.999**	**1.000**	**0.999**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**
Cations	**4.001**	**4.001**	**3.999**	**3.999**	**3.999**	**4.001**	**4.000**	**3.999**	**4.001**	**4.000**
Mg#[3]	79.42	71.65	78.91	72.55	67.14	63.58	77.06	83.19	62.47	69.58
Adjectival modifiers		titanian subsilicic		titanian subsilicic	titanian subsilicic	sodian subsilicic	subsilicic	chromian	sodian	subsilicic
Name	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E
Crystal[1]	4mc	4mc	4mc	4mc	4mc	5mc	5mc	5mc	6mc	6mc
Location[2]	I	I2	IB	N	N2	B	N	NI	B	I
Type	B3	A4	C	A3	A3	C	B3	B4	C	C
SiO_2	48.69	46.08	44.26	49.01	49.01	46.47	47.64	47.01	44.36	43.16
TiO_2	2.00	2.46	3.49	2.03	1.91	2.67	1.70	2.00	3.38	3.70
Al_2O_3	4.58	7.40	8.91	5.02	4.92	7.45	5.55	5.69	9.27	10.01
Cr_2O_3	0.07	0.54	0.00	0.09	0.01	0.00	0.00	0.00	0.00	0.05
$FeO_{(t)}$	10.86	6.22	7.45	5.85	6.22	7.12	12.47	13.32	7.63	7.84
MnO	0.39	0.11	0.11	0.10	0.13	0.12	0.52	0.48	0.12	0.12
MgO	10.53	13.10	11.89	14.25	14.19	12.49	8.99	8.68	11.41	11.12
CaO	21.07	22.76	22.85	22.95	22.36	22.75	20.78	21.34	22.97	22.27
Na_2O	1.67	0.56	0.56	0.57	0.66	0.53	1.75	1.56	0.58	0.73
K_2O	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Total	**99.86**	**99.24**	**99.54**	**99.87**	**99.40**	**99.60**	**99.40**	**100.09**	**99.71**	**98.99**
TSi	1.827	1.717	1.654	1.808	1.816	1.732	1.808	1.781	1.658	1.624
TAl	0.173	0.283	0.346	0.192	0.184	0.268	0.192	0.219	0.342	0.376
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.030	0.041	0.047	0.026	0.031	0.059	0.056	0.035	0.066	0.068
M1Ti	0.056	0.069	0.098	0.056	0.053	0.075	0.049	0.057	0.095	0.105
$M1Fe^{3+}$	0.149	0.128	0.143	0.091	0.093	0.097	0.166	0.184	0.127	0.148
$M1Fe^{2+}$	0.173	0.018	0.050	0.040	0.039	0.076	0.220	0.234	0.077	0.053
M1Cr	0.002	0.016	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.001
M1Mg	0.589	0.728	0.663	0.784	0.784	0.694	0.509	0.490	0.636	0.624
ΣM1	**0.999**	**1.000**	**1.001**	**1.000**	**1.000**	**1.001**	**1.000**	**1.000**	**1.001**	**0.999**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.018	0.048	0.040	0.049	0.061	0.050	0.010	0.004	0.035	0.045
M2Mn	0.012	0.003	0.004	0.003	0.004	0.004	0.017	0.016	0.004	0.004
M2Ca	0.847	0.908	0.915	0.907	0.888	0.908	0.845	0.866	0.920	0.898
M2Na	0.122	0.041	0.041	0.040	0.047	0.038	0.129	0.115	0.042	0.053
M2K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣM2	**0.999**	**1.000**	**1.000**	**0.999**	**1.000**	**1.000**	**1.001**	**1.001**	**1.001**	**1.000**
Cations	**3.998**	**4.000**	**4.001**	**3.999**	**4.000**	**4.001**	**4.001**	**4.001**	**4.002**	**3.999**
Mg#[3]	63.40	78.96	74.00	81.33	80.25	75.68	56.24	53.73	72.69	71.72
Adjectival modifiers Name	sodian diopside	chromian subsilicic diopside	subsilicic diopside	diopside	diopside	subsilicic diopside	sodian diopside	sodian diopside	subsilicic diopside	titanian subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E
Crystal[1]	6mc	6mc	7mc	7mc	7mc	7mc	7mc	7mc	7mc	8mc
Location[2]	I2	N	B	I	I2	I3	IB	N	NI	B
Type	C	B3	C	B4	B4	B4	C	A3	B4	C
SiO_2	44.33	49.89	43.20	50.41	50.21	49.39	44.32	50.40	48.00	48.53
TiO_2	3.41	0.92	3.85	0.52	0.90	1.00	3.25	1.00	1.84	2.15
Al_2O_3	9.06	2.96	9.56	1.99	2.77	3.93	8.50	3.74	5.21	4.54
Cr_2O_3	0.01	0.07	0.08	0.04	0.05	0.01	0.00	0.57	0.00	0.06
$FeO_{(t)}$	7.76	12.17	8.00	15.09	13.51	10.59	7.84	5.23	10.59	6.49
MnO	0.12	0.54	0.12	0.85	0.58	0.42	0.12	0.12	0.36	0.11
MgO	11.84	9.83	11.37	8.36	9.31	10.66	12.04	15.38	10.44	13.93
CaO	22.73	20.61	22.53	19.96	19.89	20.77	22.70	22.60	21.80	22.78
Na_2O	0.49	1.97	0.53	2.30	2.28	1.84	0.52	0.47	1.49	0.51
K_2O	0.00	0.02	0.02	0.03	0.00	0.04	0.01	0.01	0.00	0.02
Total	**99.75**	**98.97**	**99.27**	**99.56**	**99.49**	**98.65**	**99.30**	**99.52**	**99.73**	**99.13**
TSi	1.655	1.895	1.625	1.923	1.902	1.868	1.661	1.857	1.803	1.810
TAl	0.345	0.105	0.375	0.077	0.098	0.132	0.339	0.143	0.197	0.190
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.054	0.027	0.048	0.012	0.026	0.043	0.036	0.019	0.033	0.009
M1Ti	0.096	0.026	0.109	0.015	0.026	0.028	0.092	0.028	0.052	0.060
$M1Fe^{3+}$	0.133	0.170	0.145	0.205	0.186	0.168	0.156	0.085	0.168	0.096
$M1Fe^{2+}$	0.058	0.217	0.058	0.276	0.235	0.159	0.043	0.006	0.162	0.058
M1Cr	0.000	0.002	0.002	0.001	0.001	0.000	0.000	0.017	0.000	0.002
M1Mg	0.659	0.556	0.637	0.475	0.526	0.601	0.673	0.845	0.585	0.774
ΣM1	**1.000**	**0.998**	**0.999**	**0.984**	**1.000**	**0.999**	**1.000**	**1.000**	**1.000**	**0.999**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.051	0.000	0.049	0.000	0.007	0.008	0.046	0.070	0.003	0.048
M2Mn	0.004	0.017	0.004	0.028	0.018	0.013	0.004	0.004	0.012	0.004
M2Ca	0.909	0.839	0.908	0.816	0.807	0.842	0.912	0.892	0.877	0.910
M2Na	0.036	0.145	0.039	0.170	0.167	0.135	0.038	0.034	0.109	0.037
M2K	0.000	0.001	0.001	0.001	0.000	0.002	0.000	0.000	0.000	0.001
ΣM2	**1.000**	**1.002**	**1.001**	**1.015**	**0.999**	**1.000**	**1.000**	**1.000**	**1.001**	**1.000**
Cations	**4.000**	**4.000**	**4.000**	**3.999**	**3.999**	**3.999**	**4.000**	**4.000**	**4.001**	**3.999**
Mg#[3]	73.14	58.96	71.65	49.69	55.14	64.21	73.31	84.00	63.73	79.30
Adjectival modifiers Name	subsilicic diopside	sodian diopside	titanian subsilicic diopside	sodian hedenbergite	sodian diopside	sodian diopside	subsilicic diopside	chromian diopside	sodian diopside	diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Dike	MT-74E	MT-74E	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C
Crystal[1]	8mc	8mc	1mc	1mc	3mc	3mc	3mc	3mc	3mc	3mc
Location[2]	I	N	I	N	B	I	I2	IB	N	NI
Type	C	C	A4	B3	C	A4	A4	C	B3	B4
SiO_2	51.30	49.03	45.30	46.16	43.07	45.76	44.87	44.60	49.02	48.22
TiO_2	0.69	2.07	2.67	1.94	3.60	2.94	3.25	3.28	1.00	2.00
Al_2O_3	2.54	4.91	8.01	6.46	9.77	7.12	8.04	8.94	3.89	4.43
Cr_2O_3	0.03	0.08	0.00	0.02	0.00	0.02	0.02	0.14	0.03	0.04
$FeO_{(t)}$	11.90	5.93	7.37	12.72	9.05	8.77	9.34	7.12	13.08	11.42
MnO	0.54	0.14	0.11	0.39	0.25	0.21	0.22	0.11	0.63	0.46
MgO	10.35	14.53	12.21	8.56	9.97	11.13	10.57	12.11	9.11	9.89
CaO	20.42	22.63	22.59	21.24	22.14	22.15	21.93	22.46	20.86	20.95
Na_2O	2.10	0.55	0.57	1.59	1.00	1.00	1.00	0.71	1.86	1.85
K_2O	0.00	0.00	0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.01
Total	**99.87**	**99.87**	**98.83**	**99.10**	**98.87**	**99.11**	**99.24**	**99.47**	**99.48**	**99.27**
TSi	1.925	1.808	1.701	1.761	1.631	1.724	1.693	1.663	1.861	1.825
TAl	0.075	0.192	0.299	0.239	0.369	0.276	0.307	0.337	0.139	0.175
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.037	0.021	0.056	0.051	0.067	0.040	0.051	0.056	0.034	0.022
M1Ti	0.019	0.057	0.075	0.056	0.103	0.083	0.092	0.092	0.029	0.057
$M1Fe^{3+}$	0.151	0.092	0.133	0.193	0.170	0.141	0.143	0.143	0.183	0.174
$M1Fe^{2+}$	0.213	0.028	0.053	0.212	0.098	0.110	0.119	0.032	0.232	0.188
M1Cr	0.001	0.002	0.000	0.001	0.000	0.001	0.001	0.004	0.001	0.001
M1Mg	0.579	0.799	0.684	0.487	0.563	0.625	0.595	0.673	0.515	0.558
ΣM1	**1.000**	**0.999**	**1.001**	**1.000**	**1.001**	**1.000**	**1.001**	**1.000**	**0.994**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.009	0.062	0.046	0.001	0.019	0.026	0.033	0.048	0.000	0.000
M2Mn	0.017	0.004	0.003	0.013	0.008	0.007	0.007	0.003	0.020	0.015
M2Ca	0.821	0.894	0.909	0.868	0.898	0.894	0.887	0.897	0.848	0.849
M2Na	0.153	0.039	0.041	0.118	0.073	0.073	0.073	0.052	0.137	0.136
M2K	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000
ΣM2	**1.000**	**0.999**	**0.999**	**1.001**	**0.999**	**1.000**	**1.000**	**1.000**	**1.005**	**1.000**
Cations	**4.000**	**3.998**	**4.000**	**4.001**	**4.000**	**4.000**	**4.001**	**4.000**	**3.999**	**4.000**
Mg#[3]	60.82	81.45	74.67	54.54	66.24	69.29	66.85	75.11	55.38	60.65
Adjectival modifiers					titanian					
Name	sodian diopside	diopside	subsilicic diopside	sodian diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	sodian diopside	sodian diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C
Crystal[1]	4mc	4mc	4mc	4mc	5mc	5mc	5mc	6mic	6mic	6mic
Location[2]	B	B2	N	NI	B	I	N	B	I	N
Type	C	C	B3	B4	A4	A4	B3	C	C	A3
SiO_2	48.38	47.67	50.12	50.37	42.75	47.39	49.17	44.56	48.68	48.43
TiO_2	1.84	2.24	0.77	0.88	3.82	2.25	1.00	2.78	2.15	1.97
Al_2O_3	5.75	5.80	2.78	2.92	10.10	6.23	3.58	8.09	5.25	5.55
Cr_2O_3	0.04	0.00	0.01	0.00	0.00	0.03	0.00	0.00	0.14	0.00
$FeO_{(t)}$	6.68	8.21	12.07	12.24	7.89	6.96	13.43	7.85	6.57	6.68
MnO	0.12	0.23	0.53	0.53	0.11	0.11	0.59	0.14	0.14	0.16
MgO	13.67	12.09	10.07	10.00	10.98	13.35	8.91	11.66	13.82	13.34
CaO	22.37	22.48	20.47	20.47	22.66	23.07	20.39	22.78	22.85	23.24
Na_2O	0.57	0.86	2.18	1.92	0.62	0.50	2.14	0.66	0.43	0.58
K_2O	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.01	0.01
Total	**99.43**	**99.58**	**99.01**	**99.34**	**98.94**	**99.88**	**99.21**	**98.54**	**100.04**	**99.96**
TSi	1.797	1.782	1.897	1.906	1.612	1.756	1.871	1.682	1.801	1.792
TAl	0.203	0.218	0.103	0.094	0.388	0.244	0.129	0.318	0.199	0.208
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.048	0.037	0.021	0.036	0.061	0.028	0.031	0.042	0.029	0.034
M1Ti	0.051	0.063	0.022	0.025	0.108	0.063	0.029	0.079	0.060	0.055
$M1Fe^{3+}$	0.092	0.117	0.198	0.150	0.155	0.124	0.199	0.167	0.077	0.105
$M1Fe^{2+}$	0.050	0.109	0.184	0.226	0.059	0.047	0.229	0.056	0.068	0.070
M1Cr	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.004	0.000
M1Mg	0.757	0.674	0.568	0.564	0.617	0.738	0.505	0.656	0.762	0.736
ΣM1	**0.999**	**1.000**	**0.993**	**1.001**	**1.000**	**1.001**	**0.993**	**1.000**	**1.000**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.065	0.030	0.000	0.012	0.035	0.045	0.000	0.025	0.058	0.032
M2Mn	0.004	0.007	0.017	0.017	0.004	0.003	0.019	0.004	0.004	0.005
M2Ca	0.890	0.900	0.830	0.830	0.916	0.916	0.831	0.921	0.906	0.921
M2Na	0.041	0.062	0.160	0.141	0.046	0.036	0.158	0.049	0.031	0.041
M2K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
ΣM2	**1.000**	**0.999**	**1.007**	**1.000**	**1.001**	**1.000**	**1.008**	**1.000**	**0.999**	**0.999**
Cations	**3.999**	**3.999**	**4.000**	**4.001**	**4.001**	**4.001**	**4.001**	**4.000**	**3.999**	**3.999**
Mg#[3]	78.53	72.47	59.79	59.24	71.25	77.36	54.13	72.57	78.96	78.05
Adjectival modifiers			sodian	sodian	titanian subsilicic		sodian	subsilicic		
Name	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C
Crystal[1]	7mc	8mc	8mc	8mc	8mc	9mic	9mic	9mic	9mic	10mc
Location[2]	B	B	I	I	N	B	I	N	N2	B
Type	C	C	C	C	C	C	C	C	C	C
SiO_2	43.76	42.57	44.13	41.94	51.66	43.72	46.48	49.63	49.93	43.25
TiO_2	3.72	4.26	3.38	4.54	0.82	3.54	2.59	1.00	1.00	3.84
Al_2O_3	9.27	10.30	9.19	10.37	2.81	9.10	6.38	4.59	4.42	9.45
Cr_2O_3	0.00	0.00	0.00	0.00	0.16	0.01	0.02	0.69	0.35	0.00
$FeO_{(t)}$	7.77	8.37	7.70	8.60	8.66	7.69	7.24	5.12	5.56	7.81
MnO	0.11	0.16	0.13	0.12	0.21	0.17	0.13	0.10	0.11	0.18
MgO	11.36	10.69	11.52	10.59	12.13	11.38	13.19	15.30	15.11	11.01
CaO	22.74	22.44	22.77	22.35	21.46	22.62	22.94	22.19	22.70	22.46
Na_2O	0.61	0.70	0.58	0.61	1.92	0.73	0.54	0.45	0.50	0.76
K_2O	0.01	0.02	0.00	0.01	0.00	0.04	0.00	0.00	0.00	0.00
Total	**99.35**	**99.51**	**99.40**	**99.12**	**99.83**	**98.99**	**99.52**	**99.07**	**99.67**	**98.77**
TSi	1.643	1.600	1.654	1.586	1.915	1.645	1.731	1.836	1.837	1.633
TAl	0.357	0.400	0.346	0.414	0.085	0.355	0.269	0.164	0.163	0.367
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.052	0.056	0.059	0.048	0.037	0.048	0.010	0.035	0.029	0.054
M1Ti	0.105	0.120	0.095	0.129	0.023	0.100	0.073	0.028	0.028	0.109
$M1Fe^{3+}$	0.138	0.153	0.138	0.152	0.135	0.161	0.151	0.085	0.104	0.150
$M1Fe^{2+}$	0.068	0.071	0.064	0.075	0.130	0.053	0.033	0.000	0.001	0.068
M1Cr	0.000	0.000	0.000	0.000	0.005	0.000	0.001	0.020	0.010	0.000
M1Mg	0.636	0.599	0.644	0.597	0.670	0.638	0.732	0.832	0.829	0.620
ΣM1	**0.999**	**0.999**	**1.000**	**1.001**	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**	**1.001**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000
$M2Fe^{2+}$	0.037	0.039	0.039	0.046	0.003	0.028	0.041	0.074	0.066	0.029
M2Mn	0.004	0.005	0.004	0.004	0.006	0.005	0.004	0.003	0.003	0.006
M2Ca	0.915	0.904	0.914	0.906	0.852	0.912	0.915	0.879	0.895	0.909
M2Na	0.044	0.051	0.042	0.044	0.138	0.053	0.039	0.032	0.035	0.056
M2K	0.000	0.001	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000
ΣM2	**1.000**	**1.000**	**0.999**	**1.000**	**0.999**	**1.000**	**0.999**	**1.000**	**0.999**	**1.000**
Cations	**3.999**	**3.999**	**3.999**	**4.001**	**3.999**	**4.000**	**3.999**	**4.000**	**4.000**	**4.001**
Mg#[3]	72.35	69.49	72.77	68.62	71.43	72.50	76.49	84.15	82.90	71.51
Adjectival modifiers	titanian	titanian		titanian						titanian
Name	subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	sodian diopside	subsilicic diopside	subsilicic diopside	chromian diopside	diopside	subsilicic diopside

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[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-73C	MT-73C	MT-73C	MT-73C	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B
Crystal[1]	10mc	10mc	10mc	10mc	1mc	1mc	1mc	1mc	1mc	1mc
Location[2]	I	I2	N	N2	I	I2	N	NI	NI	NI2
Type	B4	A4	A3	A3	C	C	C	C	C	C
SiO_2	49.91	45.43	49.04	45.27	46.08	44.45	44.72	44.41	45.38	44.55
TiO_2	0.90	3.05	2.00	2.63	2.46	2.95	3.04	3.38	2.90	3.12
Al_2O_3	3.10	8.24	5.44	8.81	7.68	8.85	8.02	8.43	7.54	8.54
Cr_2O_3	0.03	0.09	0.37	0.61	0.37	0.05	0.00	0.02	0.00	0.00
$FeO_{(t)}$	12.36	6.90	5.15	5.70	6.57	7.39	8.64	7.92	9.68	8.34
MnO	0.55	0.11	0.10	0.09	0.10	0.13	0.14	0.14	0.24	0.17
MgO	9.94	12.38	14.88	12.67	12.98	12.00	11.33	11.50	10.35	11.22
CaO	20.33	22.52	22.95	23.20	22.75	22.70	22.21	22.32	21.83	22.23
Na_2O	2.02	0.70	0.49	0.56	0.52	0.62	0.99	0.90	1.00	0.89
K_2O	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**99.14**	**99.42**	**100.43**	**99.54**	**99.52**	**99.15**	**99.09**	**99.02**	**98.92**	**99.06**
TSi	1.891	1.694	1.793	1.680	1.713	1.664	1.681	1.669	1.721	1.676
TAl	0.109	0.306	0.207	0.320	0.287	0.336	0.319	0.331	0.279	0.324
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.029	0.055	0.028	0.065	0.049	0.054	0.036	0.042	0.057	0.054
M1Ti	0.026	0.086	0.055	0.073	0.069	0.083	0.086	0.096	0.083	0.088
$M1Fe^{3+}$	0.176	0.127	0.093	0.129	0.126	0.158	0.181	0.162	0.129	0.158
$M1Fe^{2+}$	0.207	0.042	0.002	0.013	0.026	0.034	0.061	0.055	0.146	0.071
M1Cr	0.001	0.003	0.011	0.018	0.011	0.002	0.000	0.001	0.000	0.000
M1Mg	0.561	0.688	0.811	0.701	0.719	0.670	0.635	0.644	0.585	0.629
ΣM1	**1.000**	**1.001**	**1.000**	**0.999**	**1.000**	**1.001**	**0.999**	**1.000**	**1.000**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.009	0.047	0.062	0.034	0.053	0.040	0.029	0.031	0.032	0.034
M2Mn	0.018	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.008	0.005
M2Ca	0.825	0.899	0.899	0.923	0.906	0.911	0.895	0.899	0.887	0.896
M2Na	0.148	0.050	0.035	0.040	0.038	0.045	0.072	0.066	0.074	0.065
M2K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣM2	**1.000**	**0.999**	**0.999**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**	**1.000**
Cations	**4.000**	**4.000**	**3.999**	**3.999**	**4.000**	**4.001**	**3.999**	**4.000**	**4.001**	**4.000**
Mg#[3]	58.87	76.11	83.78	79.93	77.81	74.28	70.09	72.20	65.58	70.52
Adjectival modifiers Name	sodian diopside	subsilicic diopside	chromian diopside	chromian subsilicic diopside	chromian subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B
Crystal[1]	2mc	2mc	2mc	2mc	3mc	3mc	3mc	3mc	3mc	3mc
Location[2]	B	I	I	N	B	I	I	I2	N	N2
Type	C	B4	B4	A3	C	C	C	C	C	C
SiO_2	42.36	50.25	48.73	47.54	45.56	47.86	49.54	47.02	44.26	43.70
TiO_2	4.09	0.51	1.00	2.25	2.70	2.12	2.00	2.28	2.86	3.61
Al_2O_3	10.14	1.91	4.03	5.66	7.19	5.73	4.43	5.80	8.83	9.42
Cr_2O_3	0.00	0.01	0.04	0.07	0.01	0.03	0.54	0.00	0.01	0.00
$FeO_{(t)}$	7.53	14.92	11.26	5.74	7.56	6.50	5.46	6.54	8.80	7.97
MnO	0.15	0.83	0.48	0.10	0.16	0.13	0.11	0.12	0.16	0.12
MgO	10.98	8.61	10.26	13.95	12.53	13.64	15.33	13.69	11.04	11.15
CaO	22.84	20.03	21.02	23.32	22.97	23.34	22.36	23.25	22.61	22.49
Na_2O	0.65	2.25	1.82	0.52	0.47	0.44	0.44	0.48	0.91	0.85
K_2O	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Total	**98.76**	**99.34**	**98.64**	**99.15**	**99.15**	**99.80**	**100.22**	**99.18**	**99.48**	**99.31**
TSi	1.600	1.919	1.849	1.767	1.708	1.773	1.818	1.751	1.658	1.639
TAl	0.400	0.081	0.151	0.233	0.292	0.227	0.182	0.249	0.342	0.361
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.051	0.005	0.029	0.015	0.025	0.023	0.009	0.006	0.048	0.055
M1Ti	0.116	0.015	0.029	0.063	0.076	0.059	0.055	0.064	0.081	0.102
$M1Fe^{3+}$	0.164	0.213	0.198	0.127	0.148	0.116	0.079	0.149	0.198	0.162
$M1Fe^{2+}$	0.051	0.263	0.159	0.020	0.050	0.048	0.003	0.021	0.057	0.057
M1Cr	0.000	0.000	0.001	0.002	0.000	0.001	0.016	0.000	0.000	0.000
M1Mg	0.618	0.490	0.580	0.773	0.700	0.753	0.838	0.760	0.617	0.623
ΣM1	**1.000**	**0.986**	**0.996**	**1.000**	**0.999**	**1.000**	**1.000**	**1.000**	**1.001**	**0.999**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.023	0.000	0.000	0.031	0.039	0.038	0.086	0.034	0.021	0.031
M2Mn	0.005	0.027	0.015	0.003	0.005	0.004	0.003	0.004	0.005	0.004
M2Ca	0.924	0.819	0.854	0.929	0.922	0.926	0.879	0.928	0.908	0.904
M2Na	0.047	0.167	0.134	0.037	0.034	0.032	0.031	0.035	0.066	0.062
M2K	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣM2	**1.000**	**1.013**	**1.003**	**1.000**	**1.000**	**1.000**	**0.999**	**1.001**	**1.000**	**1.001**
Cations	**4.000**	**3.999**	**3.999**	**4.000**	**3.999**	**4.000**	**3.999**	**4.001**	**4.001**	**4.000**
Mg#[3]	72.20	50.72	61.90	81.28	74.71	78.85	83.30	78.84	69.09	71.36
Adjectival modifiers Name	titanian subsilicic diopside	sodian diopside	sodian diopside	diopside	subsilicic diopside	diopside	chromian diopside	diopside	subsilicic diopside	titanian subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B
Crystal[1]	4mc	4mc	4mc	4mc	4mc	5mc	5mc	5mc	5mc	5mc
Location[2]	B	I	I	IB	N	B	I	I	N	N2
Type	C	A4	B4	A4	B3	C	A4	C	B3	B3
SiO_2	43.26	42.99	46.51	45.56	48.11	42.32	44.71	43.84	50.77	49.18
TiO_2	3.65	3.68	2.30	2.58	1.00	3.95	3.22	3.79	0.61	1.00
Al_2O_3	9.58	9.19	6.52	7.94	2.40	10.51	8.84	9.03	2.00	3.09
Cr_2O_3	0.01	0.01	0.00	0.41	0.00	0.04	0.26	0.02	0.00	0.00
$FeO_{(t)}$	7.51	9.66	8.96	6.30	14.63	7.79	6.86	9.17	14.44	15.43
MnO	0.17	0.18	0.24	0.09	0.65	0.19	0.11	0.16	0.82	0.78
MgO	11.41	10.42	11.05	12.76	9.10	11.01	12.42	10.77	8.90	7.73
CaO	22.68	21.89	21.96	22.69	21.96	22.57	22.96	22.52	19.91	18.59
Na_2O	0.66	1.00	1.00	0.55	0.91	0.71	0.51	1.00	2.41	3.01
K_2O	0.04	0.00	0.01	0.01	0.01	0.03	0.00	0.00	0.02	0.01
Total	**98.97**	**99.03**	**98.55**	**98.89**	**98.77**	**99.12**	**99.89**	**100.30**	**99.88**	**98.82**
TSi	1.627	1.626	1.762	1.704	1.862	1.591	1.661	1.635	1.922	1.884
TAl	0.373	0.374	0.238	0.296	0.109	0.409	0.339	0.365	0.078	0.116
TFe^{3+}	0.000	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.051	0.035	0.053	0.054	0.000	0.057	0.048	0.031	0.011	0.023
M1Ti	0.103	0.105	0.066	0.073	0.029	0.112	0.090	0.106	0.017	0.029
$M1Fe^{3+}$	0.164	0.201	0.127	0.124	0.149	0.180	0.139	0.192	0.209	0.259
$M1Fe^{2+}$	0.041	0.071	0.131	0.026	0.296	0.034	0.028	0.071	0.248	0.235
M1Cr	0.000	0.000	0.000	0.012	0.000	0.001	0.008	0.001	0.000	0.000
M1Mg	0.640	0.588	0.624	0.712	0.525	0.617	0.688	0.599	0.502	0.441
ΣM1	**0.999**	**1.000**	**1.001**	**1.001**	**0.999**	**1.001**	**1.001**	**1.000**	**0.987**	**0.987**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.031	0.034	0.027	0.047	0.000	0.031	0.046	0.023	0.000	0.000
M2Mn	0.005	0.006	0.008	0.003	0.021	0.006	0.004	0.005	0.026	0.025
M2Ca	0.914	0.887	0.891	0.909	0.911	0.909	0.914	0.900	0.808	0.763
M2Na	0.048	0.073	0.073	0.040	0.069	0.052	0.037	0.072	0.177	0.224
M2K	0.002	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000
ΣM2	**1.000**	**1.000**	**0.999**	**0.999**	**1.001**	**0.999**	**1.001**	**1.000**	**1.012**	**1.012**
Cations	**3.999**	**4.000**	**4.000**	**4.000**	**4.000**	**4.000**	**4.002**	**4.000**	**3.999**	**3.999**
Mg#[3]	73.06	65.77	68.65	78.33	52.55	71.58	76.36	67.68	52.35	47.17
Adjectival modifiers Name	titanian subsilicic diopside	titanian subsilicic diopside	diopside	chromian subsilicic diopside	diopside	titanian subsilicic diopside	subsilicic diopside	titanian subsilicic diopside	sodian diopside	egirine-augit

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B
Crystal[1]	6mc	6mc	6mc	6mc	7mc	7mc	8mc	8mc	8mc	8mc
Location[2]	I	I	IB	N	B	N	B	I	IB	N
Type	C	C	C	B3	C	C	C	C	C	C
SiO_2	44.90	43.68	43.06	49.01	42.16	46.41	43.74	44.36	41.72	45.28
TiO_2	2.97	3.67	3.32	1.00	4.16	2.29	3.46	3.35	4.60	3.13
Al_2O_3	8.16	9.57	9.28	2.65	10.33	7.77	9.58	8.96	10.75	7.32
Cr_2O_3	0.00	0.09	0.00	0.03	0.00	0.44	0.04	0.06	0.00	0.00
$FeO_{(t)}$	8.91	7.51	8.33	17.44	7.92	6.73	7.85	7.47	8.27	10.54
MnO	0.20	0.12	0.15	0.89	0.12	0.09	0.15	0.09	0.14	0.29
MgO	11.00	11.67	11.47	6.73	11.07	13.08	11.51	12.19	10.52	9.87
CaO	22.22	22.56	23.11	18.71	22.95	22.82	22.71	22.93	22.71	21.59
Na_2O	1.00	0.59	0.62	3.07	0.59	0.57	0.69	0.55	0.63	1.41
K_2O	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.00
Total	**99.37**	**99.45**	**99.35**	**99.54**	**99.30**	**100.19**	**99.73**	**99.96**	**99.35**	**99.43**
TSi	1.686	1.635	1.615	1.880	1.585	1.713	1.633	1.649	1.573	1.710
TAl	0.314	0.365	0.385	0.120	0.415	0.287	0.367	0.351	0.427	0.290
TFe^{3+}	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.001**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.047	0.057	0.025	0.000	0.042	0.051	0.054	0.041	0.050	0.036
M1Ti	0.084	0.103	0.094	0.029	0.118	0.064	0.097	0.094	0.130	0.089
$M1Fe^{3+}$	0.171	0.140	0.217	0.290	0.180	0.136	0.167	0.159	0.162	0.178
$M1Fe^{2+}$	0.082	0.046	0.023	0.269	0.040	0.017	0.041	0.029	0.067	0.141
M1Cr	0.000	0.003	0.000	0.001	0.000	0.013	0.001	0.002	0.000	0.000
M1Mg	0.616	0.651	0.641	0.385	0.620	0.720	0.640	0.676	0.591	0.556
ΣM1	**1.000**	**1.000**	**1.000**	**0.974**	**1.000**	**1.001**	**1.000**	**1.001**	**1.000**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.026	0.049	0.021	0.000	0.029	0.054	0.037	0.044	0.032	0.014
M2Mn	0.006	0.004	0.005	0.029	0.004	0.003	0.005	0.003	0.005	0.009
M2Ca	0.894	0.905	0.929	0.769	0.924	0.902	0.908	0.913	0.917	0.874
M2Na	0.073	0.043	0.045	0.228	0.043	0.041	0.050	0.039	0.046	0.103
M2K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣM2	**0.999**	**1.001**	**1.000**	**1.026**	**1.000**	**1.000**	**1.000**	**0.999**	**1.000**	**1.000**
Cations	**3.999**	**4.001**	**4.000**	**4.001**	**4.000**	**4.001**	**4.000**	**4.000**	**4.000**	**4.000**
Mg#[3]	68.83	73.48	71.06	40.74	71.35	77.67	72.32	74.45	69.37	62.54
Adjectival modifiers Name	subsilicic diopside	titanian subsilicic diopside	subsilicic diopside	egirine-augit	titanian subsilicic diopside	chromian subsilicic diopside	subsilicic diopside	subsilicic diopside	titanian subsilicic diopside	sodian subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-74B	MT-74B	MT-74B	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F
Crystal[1]	9mic	9mic	9mic	1mc	1mc	1mc	1mc	2mc	2mc	2mc
Location[2]	B	I	N	B	I	N	NI	B	I	N
Type	C	C	C	C	C	C	C	C	C	C
SiO_2	42.92	45.17	48.43	45.67	44.69	45.62	42.97	41.26	45.73	47.74
TiO_2	3.67	2.81	1.78	2.71	3.23	2.72	4.16	4.61	2.88	2.20
Al_2O_3	9.45	8.23	5.18	8.19	8.84	7.58	9.45	10.90	8.17	6.17
Cr_2O_3	0.00	0.78	0.36	0.13	0.09	0.00	0.01	0.02	0.24	0.04
$FeO_{(t)}$	7.87	6.50	6.22	6.82	7.61	8.75	8.84	9.36	6.89	6.91
MnO	0.11	0.10	0.11	0.08	0.13	0.16	0.14	0.16	0.09	0.15
MgO	11.72	12.94	14.74	12.88	12.06	11.66	10.64	10.04	12.73	13.41
CaO	22.84	22.43	22.12	22.35	22.66	21.94	22.29	22.36	22.32	22.57
Na_2O	0.52	0.58	0.53	0.62	0.73	0.91	0.86	0.71	0.59	0.63
K_2O	0.05	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01
Total	**99.16**	**99.57**	**99.46**	**99.47**	**100.04**	**99.34**	**99.35**	**99.42**	**99.65**	**99.82**
TSi	1.612	1.679	1.791	1.698	1.659	1.710	1.619	1.559	1.700	1.768
TAl	0.388	0.321	0.209	0.302	0.341	0.290	0.381	0.441	0.300	0.232
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.030	0.039	0.017	0.056	0.046	0.045	0.038	0.044	0.058	0.037
M1Ti	0.104	0.079	0.050	0.076	0.090	0.077	0.118	0.131	0.081	0.061
$M1Fe^{3+}$	0.190	0.144	0.119	0.135	0.164	0.156	0.168	0.185	0.115	0.116
$M1Fe^{2+}$	0.020	0.000	0.000	0.015	0.031	0.070	0.078	0.074	0.034	0.044
M1Cr	0.000	0.023	0.010	0.004	0.003	0.000	0.000	0.000	0.007	0.001
M1Mg	0.656	0.715	0.804	0.714	0.667	0.652	0.598	0.566	0.706	0.740
ΣM1	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**	**1.000**	**1.000**	**1.000**	**1.001**	**0.999**
M2Mg	0.000	0.002	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.037	0.058	0.073	0.062	0.042	0.048	0.033	0.037	0.065	0.054
M2Mn	0.004	0.003	0.003	0.003	0.004	0.005	0.004	0.005	0.003	0.005
M2Ca	0.919	0.893	0.877	0.890	0.901	0.881	0.900	0.905	0.889	0.896
M2Na	0.038	0.042	0.038	0.045	0.052	0.066	0.063	0.052	0.042	0.045
M2K	0.002	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
ΣM2	**1.000**	**0.999**	**1.000**	**1.001**	**0.999**	**1.000**	**1.000**	**0.999**	**0.999**	**1.000**
Cations	**4.000**	**3.999**	**4.000**	**4.001**	**4.000**	**4.000**	**4.000**	**3.999**	**4.000**	**3.999**
Mg#[3]	72.65	78.02	80.90	77.11	73.78	70.41	68.19	65.66	76.74	77.57
Adjectival modifiers Name	titanian subsilicic diopside	chromian subsilicic diopside	diopside	subsilicic diopside	subsilicic diopside	subsilicic diopside	titanian subsilicic diopside	titanian subsilicic diopside	subsilicic diopside	diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F
Crystal[1]	2mc	3mc	3mc	3mc	3mc	5mc	5mc	5mc	5mc	5mc
Location[2]	NI	B	N	NI	NI2	B	B2	I	I	I2
Type	C	C	B5	B5	B5	C	C	C	C	C
SiO_2	44.68	40.80	42.29	42.49	45.16	40.64	41.89	44.61	42.18	45.47
TiO_2	3.23	4.63	3.47	3.67	2.47	5.13	4.44	2.77	4.04	2.56
Al_2O_3	8.78	10.49	9.39	8.86	6.97	10.59	9.62	8.18	9.68	7.64
Cr_2O_3	0.10	0.00	0.00	0.04	0.02	0.01	0.00	0.00	0.00	0.00
$FeO_{(t)}$	7.49	8.84	12.15	12.39	10.93	8.77	8.76	8.62	10.27	8.09
MnO	0.10	0.14	0.28	0.34	0.31	0.12	0.14	0.14	0.20	0.14
MgO	12.06	10.50	8.25	8.20	9.76	10.56	10.65	11.42	9.34	11.64
CaO	22.25	22.73	21.73	21.58	22.30	22.53	22.66	22.53	21.85	22.49
Na_2O	0.71	0.63	1.00	1.35	1.00	0.54	0.62	0.89	1.00	0.89
K_2O	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Total	**99.39**	**98.78**	**98.56**	**98.92**	**98.93**	**98.90**	**98.78**	**99.16**	**98.56**	**98.92**
TSi	1.669	1.548	1.628	1.629	1.720	1.543	1.590	1.675	1.612	1.709
TAl	0.331	0.452	0.372	0.371	0.280	0.457	0.410	0.325	0.388	0.291
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.056	0.017	0.054	0.029	0.032	0.016	0.021	0.037	0.048	0.047
M1Ti	0.091	0.132	0.101	0.106	0.071	0.146	0.127	0.078	0.116	0.072
$M1Fe^{3+}$	0.140	0.216	0.190	0.228	0.178	0.187	0.180	0.196	0.180	0.164
$M1Fe^{2+}$	0.039	0.040	0.182	0.167	0.164	0.053	0.070	0.050	0.123	0.065
M1Cr	0.003	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000
M1Mg	0.672	0.594	0.474	0.469	0.554	0.598	0.603	0.639	0.532	0.652
ΣM1	**1.001**	**0.999**	**1.001**	**1.000**	**1.000**	**1.000**	**1.001**	**1.000**	**0.999**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.055	0.024	0.020	0.002	0.006	0.039	0.028	0.025	0.025	0.025
M2Mn	0.003	0.004	0.009	0.011	0.010	0.004	0.005	0.004	0.006	0.004
M2Ca	0.891	0.924	0.897	0.886	0.910	0.916	0.922	0.906	0.895	0.905
M2Na	0.051	0.046	0.075	0.100	0.074	0.040	0.046	0.065	0.074	0.065
M2K	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣM2	**1.000**	**0.999**	**1.001**	**0.999**	**1.000**	**0.999**	**1.001**	**1.000**	**1.000**	**0.999**
Cations	**4.001**	**3.998**	**4.002**	**3.999**	**4.000**	**3.999**	**4.002**	**4.000**	**3.999**	**3.999**
Mg#[3]	74.17	67.96	54.73	54.16	61.42	68.19	68.44	70.22	61.86	71.96
Adjectival modifiers Name	subsilicic diopside	titanian subsilicic diopside	titanian subsilicic diopside	titanian subsilicic diopside	subsilicic diopside	titanian subsilicic diopside	titanian subsilicic diopside	subsilicic diopside	titanian subsilicic diopside	subsilicic diopside

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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F
Crystal[1]	5mc	5mc	5mc	5mc	6mc	6mc	6mc	6mc	6mc	7mc
Location[2]	I2	I3	IB	N	B	I	N	NI	NN	B
Type	C	C	C	C	C	C	C	C	C	C
SiO_2	43.60	45.68	44.92	47.20	41.96	44.87	47.50	47.24	44.26	43.31
TiO_2	3.43	2.74	2.63	1.95	3.88	2.89	2.86	2.25	4.19	3.92
Al_2O_3	8.88	7.74	7.86	5.94	9.92	7.61	4.87	5.53	8.32	9.15
Cr_2O_3	0.00	0.00	0.01	0.02	0.01	0.02	0.02	0.00	0.08	0.01
$FeO_{(t)}$	9.10	7.74	7.97	8.82	9.43	7.81	8.38	7.41	6.87	8.01
MnO	0.18	0.11	0.12	0.22	0.22	0.12	0.17	0.13	0.13	0.12
MgO	10.54	12.17	11.77	11.59	10.03	12.32	12.02	13.60	11.97	11.41
CaO	22.16	22.64	22.49	22.49	22.55	22.97	22.16	22.59	22.74	22.97
Na_2O	0.92	0.71	0.73	0.92	0.79	0.59	1.00	0.44	1.00	0.57
K_2O	0.02	0.00	0.02	0.01	0.05	0.01	0.02	0.02	0.02	0.00
Total	**98.83**	**99.53**	**98.52**	**99.16**	**98.84**	**99.21**	**99.00**	**99.22**	**99.58**	**99.47**
TSi	1.650	1.704	1.695	1.774	1.593	1.681	1.789	1.764	1.650	1.626
TAl	0.350	0.296	0.305	0.226	0.407	0.319	0.211	0.236	0.350	0.374
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.046	0.045	0.044	0.037	0.037	0.016	0.005	0.007	0.015	0.030
M1Ti	0.098	0.077	0.075	0.055	0.111	0.081	0.081	0.063	0.117	0.111
$M1Fe^{3+}$	0.175	0.147	0.165	0.144	0.208	0.182	0.116	0.134	0.170	0.164
$M1Fe^{2+}$	0.086	0.054	0.054	0.113	0.077	0.032	0.122	0.038	0.030	0.057
M1Cr	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.002	0.000
M1Mg	0.595	0.677	0.662	0.649	0.568	0.688	0.675	0.757	0.665	0.638
ΣM1	**1.000**	**1.000**	**1.000**	**0.999**	**1.001**	**0.999**	**1.000**	**0.999**	**0.999**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.027	0.040	0.032	0.020	0.015	0.031	0.026	0.059	0.014	0.031
M2Mn	0.006	0.004	0.004	0.007	0.007	0.004	0.005	0.004	0.004	0.004
M2Ca	0.899	0.905	0.909	0.906	0.917	0.922	0.894	0.904	0.908	0.924
M2Na	0.067	0.051	0.053	0.067	0.058	0.043	0.073	0.032	0.072	0.042
M2K	0.001	0.000	0.001	0.000	0.002	0.000	0.001	0.001	0.001	0.000
ΣM2	**1.000**	**1.000**	**0.999**	**1.000**	**0.999**	**1.000**	**0.999**	**1.000**	**0.999**	**1.001**
Cations	**4.000**	**4.000**	**3.999**	**3.999**	**4.000**	**3.999**	**3.999**	**3.999**	**3.998**	**4.001**
Mg#[3]	67.38	73.75	72.51	70.09	65.44	73.74	71.88	76.62	75.65	71.69
Adjectival modifiers Name	subsilicic diopside	subsilicic diopside	subsilicic diopside	diopside	titanian subsilicic diopside	subsilicic diopside	diopside	diopside	titanian subsilicic diopside	titanian subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-75	MT-75	MT-75	MT-75
Crystal[1]	7mc	7mc	7mc	8mic	9mic	10mic	1mc	1mc	1mc	2mic
Location[2]	I	N	NI	N	N	N	B	I	N	N
Type	C	C	C	C	C	C	C	A4	B5	C
SiO_2	46.33	47.65	49.90	50.53	46.77	46.85	44.98	47.78	47.72	47.86
TiO_2	2.53	2.17	1.51	0.87	2.26	2.11	4.01	2.15	2.15	3.11
Al_2O_3	7.83	6.28	4.69	3.61	6.99	6.88	7.35	6.81	6.28	4.69
Cr_2O_3	0.07	0.08	0.09	0.03	0.06	0.00	0.00	0.49	0.03	0.00
$FeO_{(t)}$	7.16	6.63	6.68	9.30	7.23	8.00	7.46	6.47	9.93	6.73
MnO	0.11	0.12	0.15	0.33	0.13	0.17	0.14	0.12	0.27	0.15
MgO	12.75	13.52	14.56	12.43	13.09	12.08	12.20	13.33	10.98	13.88
CaO	22.38	22.31	22.38	20.98	22.11	22.10	22.72	21.53	20.61	23.01
Na_2O	0.69	0.67	0.53	1.47	0.70	0.91	0.56	0.84	1.57	0.47
K_2O	0.02	0.02	0.00	0.05	0.08	0.01	0.00	0.00	0.00	0.03
Total	**99.87**	**99.45**	**100.49**	**99.59**	**99.41**	**99.12**	**99.42**	**99.51**	**99.54**	**99.93**
TSi	1.717	1.768	1.830	1.881	1.739	1.754	1.687	1.772	1.788	1.776
TAl	0.283	0.232	0.170	0.119	0.261	0.246	0.313	0.228	0.212	0.205
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.059	0.043	0.033	0.040	0.045	0.057	0.012	0.069	0.065	0.000
M1Ti	0.071	0.061	0.042	0.024	0.063	0.059	0.113	0.060	0.061	0.087
$M1Fe^{3+}$	0.131	0.114	0.088	0.138	0.141	0.136	0.113	0.085	0.139	0.085
$M1Fe^{2+}$	0.034	0.032	0.039	0.108	0.023	0.073	0.079	0.035	0.122	0.061
M1Cr	0.002	0.002	0.003	0.001	0.002	0.000	0.000	0.014	0.001	0.000
M1Mg	0.704	0.748	0.796	0.690	0.726	0.674	0.682	0.737	0.613	0.768
ΣM1	**1.001**	**1.000**	**1.001**	**1.001**	**1.000**	**0.999**	**0.999**	**1.000**	**1.001**	**1.001**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.058	0.060	0.078	0.044	0.061	0.041	0.042	0.081	0.050	0.045
M2Mn	0.004	0.004	0.005	0.010	0.004	0.006	0.004	0.004	0.009	0.005
M2Ca	0.889	0.887	0.879	0.837	0.881	0.886	0.913	0.855	0.827	0.915
M2Na	0.049	0.048	0.038	0.106	0.050	0.066	0.040	0.060	0.114	0.034
M2K	0.001	0.001	0.000	0.002	0.004	0.000	0.000	0.000	0.000	0.001
ΣM2	**1.001**	**1.000**	**1.000**	**0.999**	**1.000**	**0.999**	**0.999**	**1.000**	**1.000**	**1.000**
Cations	**4.002**	**4.000**	**4.001**	**4.000**	**4.000**	**3.998**	**3.998**	**4.000**	**4.001**	**4.001**
Mg#[3]	75.94	78.41	79.52	70.41	76.34	72.94	74.45	78.57	66.34	78.53
Adjectival modifiers Name	subsilicic diopside	diopside	diopside	sodian diopside	subsilicic diopside	diopside	titanian subsilicic diopside	chromian diopside	sodian diopside	diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75
Crystal[1]	3mc	3mc	3mc	3mc	3mc	3mc	3mc	4mc	4mc	5mc
Location[2]	B	I	I	IB	N	N2	NI	N	N2	B
Type	C	A4	C	C	B5	B5	B5	C	C	C
SiO_2	47.92	48.17	49.46	48.33	46.21	47.69	47.30	47.86	47.56	46.77
TiO_2	2.78	2.19	1.90	2.65	2.10	1.75	2.21	2.28	2.49	2.78
Al_2O_3	4.41	6.35	5.12	4.30	7.52	6.58	7.47	6.88	7.17	6.31
Cr_2O_3	0.00	0.45	0.42	0.02	0.04	0.02	0.00	0.80	0.61	0.21
$FeO_{(t)}$	6.50	6.45	6.19	6.42	13.20	9.99	10.37	5.61	6.46	6.84
MnO	0.19	0.10	0.11	0.13	0.39	0.31	0.29	0.11	0.11	0.10
MgO	14.02	13.85	14.61	14.14	8.06	11.15	10.56	13.79	13.23	13.23
CaO	23.35	21.68	21.16	23.16	19.27	20.60	20.33	21.63	21.25	22.46
Na_2O	0.50	0.78	0.69	0.38	2.37	1.54	1.64	0.77	0.88	0.57
K_2O	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.02	0.01
Total	**99.67**	**100.03**	**99.66**	**99.53**	**99.17**	**99.64**	**100.17**	**99.74**	**99.78**	**99.28**
TSi	1.780	1.775	1.827	1.798	1.755	1.782	1.762	1.767	1.760	1.746
TAl	0.193	0.225	0.173	0.188	0.245	0.218	0.238	0.233	0.240	0.254
TFe^{3+}	0.027	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**1.999**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.000	0.051	0.049	0.000	0.092	0.071	0.090	0.066	0.073	0.023
M1Ti	0.078	0.061	0.053	0.074	0.060	0.049	0.062	0.063	0.069	0.078
$M1Fe^{3+}$	0.100	0.094	0.055	0.080	0.205	0.160	0.142	0.071	0.073	0.110
$M1Fe^{2+}$	0.046	0.020	0.026	0.061	0.185	0.099	0.120	0.017	0.037	0.047
M1Cr	0.000	0.013	0.012	0.001	0.001	0.001	0.000	0.023	0.018	0.006
M1Mg	0.776	0.761	0.804	0.784	0.456	0.621	0.586	0.759	0.730	0.736
ΣM1	**1.000**	**1.000**	**0.999**	**1.000**	**0.999**	**1.001**	**1.000**	**0.999**	**1.000**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.029	0.085	0.110	0.045	0.029	0.054	0.061	0.085	0.090	0.057
M2Mn	0.006	0.003	0.003	0.004	0.013	0.010	0.009	0.003	0.003	0.003
M2Ca	0.929	0.856	0.837	0.923	0.784	0.825	0.811	0.856	0.843	0.898
M2Na	0.036	0.056	0.049	0.027	0.175	0.112	0.118	0.055	0.063	0.041
M2K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
ΣM2	**1.000**	**1.000**	**0.999**	**0.999**	**1.001**	**1.001**	**0.999**	**0.999**	**1.000**	**1.000**
Cations	**4.000**	**4.000**	**3.998**	**3.998**	**4.000**	**4.002**	**3.999**	**3.998**	**4.000**	**4.000**
Mg#[3]	79.35	79.27	80.80	79.76	52.11	66.49	64.47	81.44	78.49	77.47
Adjectival modifiers Name	diopside	chromian diopside	ferroan chromian diopside	diopside	sodian diopside	sodian diopside	sodian diopside	chromian diopside	chromian diopside	subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75
Crystal[1]	5mc	5mc	6mc	6mc	6mc	6mc	7mc	7mc	7mc	7mc
Location[2]	I	N	B	I	N	NI	B	B2	I	I2
Type	C	C	C	A4	B5	B5	C	C	A4	C
SiO_2	48.06	47.28	44.65	48.31	47.23	47.61	47.71	44.93	50.69	49.60
TiO_2	2.05	2.15	3.96	1.97	1.90	1.85	3.21	3.60	1.59	1.94
Al_2O_3	6.72	7.09	7.06	5.76	6.55	6.18	5.15	6.91	3.72	4.20
Cr_2O_3	0.73	0.74	0.00	0.18	0.04	0.03	0.01	0.00	0.22	0.00
$FeO_{(t)}$	6.13	6.37	7.11	6.57	11.96	11.80	6.66	7.39	5.95	6.63
MnO	0.09	0.11	0.12	0.14	0.38	0.37	0.14	0.12	0.11	0.11
MgO	13.77	13.35	12.67	13.75	9.12	9.36	13.47	12.56	15.31	14.40
CaO	21.61	21.74	22.91	21.68	19.74	20.10	23.05	23.02	21.81	22.47
Na_2O	0.78	0.89	0.52	0.80	2.17	2.18	0.44	0.55	0.59	0.54
K_2O	0.00	0.02	0.03	0.00	0.02	0.00	0.01	0.01	0.00	0.00
Total	**99.94**	**99.75**	**99.03**	**99.17**	**99.12**	**99.48**	**99.85**	**99.09**	**99.98**	**99.90**
TSi	1.772	1.748	1.678	1.796	1.787	1.793	1.775	1.687	1.863	1.833
TAl	0.228	0.252	0.312	0.204	0.213	0.207	0.225	0.306	0.137	0.167
TFe^{3+}	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.007	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.064	0.056	0.000	0.048	0.079	0.067	0.000	0.000	0.024	0.016
M1Ti	0.057	0.060	0.112	0.055	0.054	0.052	0.090	0.102	0.044	0.054
$M1Fe^{3+}$	0.085	0.118	0.137	0.098	0.184	0.192	0.076	0.149	0.060	0.082
$M1Fe^{2+}$	0.017	0.008	0.042	0.032	0.167	0.162	0.086	0.046	0.027	0.055
M1Cr	0.021	0.022	0.000	0.005	0.001	0.001	0.000	0.000	0.006	0.000
M1Mg	0.757	0.736	0.710	0.762	0.514	0.526	0.747	0.703	0.839	0.793
ΣM1	**1.001**	**1.000**	**1.001**	**1.000**	**0.999**	**1.000**	**0.999**	**1.000**	**1.000**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.088	0.071	0.035	0.074	0.027	0.018	0.045	0.030	0.096	0.068
M2Mn	0.003	0.003	0.004	0.005	0.012	0.012	0.004	0.004	0.003	0.003
M2Ca	0.854	0.861	0.922	0.863	0.800	0.811	0.919	0.926	0.859	0.890
M2Na	0.056	0.064	0.038	0.058	0.159	0.159	0.032	0.040	0.042	0.039
M2K	0.000	0.001	0.002	0.000	0.001	0.000	0.000	0.001	0.000	0.000
ΣM2	**1.001**	**1.000**	**1.001**	**1.000**	**0.999**	**1.000**	**1.000**	**1.001**	**1.000**	**1.000**
Cations	**4.002**	**4.000**	**4.002**	**4.000**	**3.998**	**4.000**	**3.999**	**4.001**	**4.000**	**4.000**
Mg#[3]	79.94	78.89	76.02	78.88	57.62	58.57	78.30	75.19	82.09	79.46
Adjectival modifiers Name	chromian diopside	chromian subsilicic diopside	titanian subsilicic diopside	diopside	sodian diopside	sodian diopside	diopside	titanian subsilicic diopside	diopside	diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75
Crystal[1]	7mc	7mc	8mc	8mc	8mc	8mc	8mc	8mc	10mc	10mc
Location[2]	I3	N	B	I	N	N2	N3	NI	B	I
Type	C	B5	C	A4	B5	B5	B5	B5	C	A4
SiO_2	45.98	46.65	47.90	49.90	47.85	47.48	46.55	47.57	45.20	46.93
TiO_2	3.54	1.86	2.72	1.62	1.70	1.75	2.06	1.83	3.75	2.87
Al_2O_3	5.79	7.50	4.79	3.94	6.31	6.32	7.13	6.18	7.02	7.13
Cr_2O_3	0.00	0.01	0.02	0.23	0.01	0.00	0.00	0.02	0.00	0.53
$FeO_{(t)}$	7.69	12.33	5.99	5.75	11.75	11.68	11.95	11.22	7.34	6.48
MnO	0.14	0.42	0.12	0.12	0.39	0.37	0.36	0.33	0.13	0.10
MgO	12.93	8.62	14.05	14.99	9.41	9.42	8.84	9.98	12.55	13.13
CaO	22.97	19.65	22.91	22.41	19.85	19.59	19.68	20.04	22.60	21.72
Na_2O	0.44	2.25	0.45	0.52	2.14	2.11	2.13	2.10	0.70	0.80
K_2O	0.01	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.02	0.00
Total	**99.49**	**99.29**	**98.96**	**99.51**	**99.41**	**98.73**	**98.70**	**99.26**	**99.31**	**99.69**
TSi	1.723	1.763	1.789	1.844	1.803	1.801	1.770	1.790	1.692	1.741
TAl	0.255	0.237	0.211	0.156	0.197	0.199	0.230	0.210	0.308	0.259
TFe^{3+}	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.000	0.097	0.000	0.015	0.083	0.083	0.089	0.064	0.002	0.053
M1Ti	0.100	0.053	0.076	0.045	0.048	0.050	0.059	0.052	0.106	0.080
$M1Fe^{3+}$	0.110	0.198	0.089	0.083	0.173	0.171	0.179	0.195	0.146	0.087
$M1Fe^{2+}$	0.069	0.166	0.051	0.025	0.167	0.163	0.172	0.129	0.046	0.038
M1Cr	0.000	0.000	0.001	0.007	0.000	0.000	0.000	0.000	0.000	0.015
M1Mg	0.722	0.486	0.782	0.826	0.529	0.533	0.501	0.560	0.700	0.726
ΣM1	**1.001**	**1.000**	**0.999**	**1.001**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**0.999**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.041	0.026	0.047	0.070	0.030	0.036	0.030	0.029	0.037	0.076
M2Mn	0.004	0.014	0.004	0.004	0.012	0.012	0.012	0.010	0.004	0.003
M2Ca	0.922	0.796	0.917	0.887	0.801	0.796	0.802	0.808	0.906	0.863
M2Na	0.032	0.165	0.033	0.037	0.156	0.155	0.157	0.153	0.051	0.058
M2K	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.001	0.000
ΣM2	**0.999**	**1.001**	**1.001**	**0.999**	**0.999**	**1.000**	**1.001**	**1.000**	**0.999**	**1.000**
Cations	**4.000**	**4.001**	**4.000**	**4.000**	**3.999**	**4.000**	**4.001**	**4.000**	**3.999**	**3.999**
Mg#[3]	74.90	55.48	80.70	82.27	58.84	59.03	56.80	61.34	75.35	78.32
Adjectival modifiers Name	subsilicic diopside	sodian diopside	diopside	diopside	sodian diopside	sodian diopside	sodian diopside	sodian diopside	titanian subsilicic diopside	chromian subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75
Crystal[1]	10mc	10mc	11mc	11mc	12mc	12mc	12mc	13mic	13mic	14mc
Location[2]	N	N2	I	N	B	I	N	B	N	B2
Type	B5	B5	A4	B5	C	A4	B5	C	C	C
SiO_2	46.33	45.46	47.58	47.49	45.57	48.47	47.71	46.44	50.37	43.96
TiO_2	2.33	2.35	2.65	1.80	3.60	2.17	1.78	3.14	1.77	4.64
Al_2O_3	6.03	7.46	5.98	6.51	7.06	5.43	6.45	7.12	3.55	7.86
Cr_2O_3	0.04	0.00	0.22	0.00	0.01	0.20	0.01	0.25	0.14	0.03
$FeO_{(t)}$	14.36	14.21	6.46	11.76	7.00	6.20	11.81	6.87	5.94	7.45
MnO	0.49	0.45	0.10	0.36	0.12	0.09	0.37	0.09	0.13	0.12
MgO	7.68	7.10	13.76	9.31	12.59	13.99	9.34	13.00	15.05	12.03
CaO	19.28	18.89	22.30	19.72	22.78	22.46	19.85	21.87	22.45	22.85
Na_2O	2.23	2.63	0.60	2.14	0.56	0.65	2.05	0.70	0.53	0.53
K_2O	0.02	0.01	0.01	0.02	0.01	0.01	0.00	0.04	0.01	0.00
Total	**98.79**	**98.56**	**99.66**	**99.11**	**99.30**	**99.67**	**99.36**	**99.53**	**99.94**	**99.47**
TSi	1.780	1.745	1.765	1.795	1.706	1.793	1.800	1.729	1.855	1.651
TAl	0.220	0.255	0.235	0.205	0.294	0.207	0.200	0.271	0.145	0.348
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.053	0.082	0.026	0.085	0.018	0.030	0.087	0.041	0.009	0.000
M1Ti	0.067	0.068	0.074	0.051	0.101	0.060	0.051	0.088	0.049	0.131
$M1Fe^{3+}$	0.196	0.233	0.098	0.175	0.113	0.096	0.161	0.098	0.071	0.124
$M1Fe^{2+}$	0.242	0.211	0.035	0.165	0.065	0.036	0.176	0.044	0.040	0.071
M1Cr	0.001	0.000	0.006	0.000	0.000	0.006	0.000	0.007	0.004	0.001
M1Mg	0.440	0.406	0.761	0.525	0.703	0.772	0.525	0.722	0.826	0.674
ΣM1	**0.999**	**1.000**	**1.000**	**1.001**	**1.000**	**1.000**	**1.000**	**1.000**	**0.999**	**1.001**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.023	0.012	0.067	0.032	0.041	0.060	0.036	0.072	0.072	0.038
M2Mn	0.016	0.015	0.003	0.011	0.004	0.003	0.012	0.003	0.004	0.004
M2Ca	0.794	0.777	0.886	0.799	0.914	0.890	0.803	0.872	0.886	0.919
M2Na	0.166	0.196	0.043	0.157	0.041	0.047	0.150	0.051	0.038	0.039
M2K	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.002	0.000	0.000
ΣM2	**1.000**	**1.001**	**0.999**	**1.000**	**1.000**	**1.000**	**1.001**	**1.000**	**1.000**	**1.000**
Cations	**3.999**	**4.001**	**3.999**	**4.001**	**4.000**	**4.000**	**4.001**	**4.000**	**3.999**	**4.001**
Mg#[3]	48.83	47.10	79.19	58.53	76.25	80.08	58.46	77.14	81.86	74.23
Adjectival modifiers Name	sodian hedenbergite	subsilicic egirine-augit	diopside	sodian diopside	titanian subsilicic diopside	diopside	sodian diopside	subsilicic diopside	diopside	titanian subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75
Crystal[1]	14mc	14mc	14mc	14mc	14mc	14mc	15mc	15mc	15mc	15mc
Location[2]	I	I2	IB	N	N2	NI	B	B2	I	I2
Type	A4	A4	C	B5	B5	B5	C	C	C	C
SiO_2	46.76	50.78	46.26	48.57	48.01	47.58	47.66	42.63	46.37	50.79
TiO_2	2.70	1.34	3.55	1.53	1.88	1.93	2.85	5.35	2.87	1.32
Al_2O_3	6.95	3.28	5.56	5.83	6.45	6.50	4.64	8.26	8.30	4.19
Cr_2O_3	0.25	0.14	0.00	0.00	0.01	0.00	0.01	0.00	0.74	0.51
$FeO_{(t)}$	6.36	5.67	7.01	11.23	9.83	12.10	6.48	7.56	6.71	5.82
MnO	0.13	0.10	0.11	0.40	0.26	0.36	0.12	0.16	0.14	0.13
MgO	13.32	15.41	13.33	10.01	11.24	9.37	13.92	11.52	12.57	15.10
CaO	21.79	22.29	23.05	19.88	20.58	20.00	23.25	22.58	21.21	20.93
Na_2O	0.75	0.52	0.46	2.01	1.47	2.09	0.41	0.68	0.93	0.71
K_2O	0.02	0.00	0.00	0.00	0.02	0.00	0.01	0.04	0.00	0.00
Total	**99.04**	**99.53**	**99.33**	**99.46**	**99.74**	**99.93**	**99.34**	**98.78**	**99.84**	**99.50**
TSi	1.743	1.873	1.731	1.825	1.792	1.786	1.777	1.615	1.719	1.874
TAl	0.257	0.127	0.245	0.175	0.208	0.214	0.204	0.369	0.281	0.126
TFe^{3+}	0.000	0.000	0.024	0.000	0.000	0.000	0.019	0.016	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.048	0.015	0.000	0.083	0.076	0.073	0.000	0.000	0.082	0.056
M1Ti	0.076	0.037	0.100	0.043	0.053	0.054	0.080	0.152	0.080	0.037
$M1Fe^{3+}$	0.104	0.070	0.101	0.150	0.132	0.183	0.092	0.131	0.083	0.032
$M1Fe^{2+}$	0.024	0.026	0.055	0.162	0.113	0.165	0.054	0.066	0.039	0.030
M1Cr	0.007	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.015
M1Mg	0.740	0.847	0.744	0.561	0.626	0.524	0.774	0.651	0.695	0.831
ΣM1	**0.999**	**0.999**	**1.000**	**0.999**	**1.000**	**0.999**	**1.000**	**1.000**	**1.001**	**1.001**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.070	0.079	0.039	0.040	0.061	0.032	0.037	0.026	0.086	0.118
M2Mn	0.004	0.003	0.003	0.013	0.008	0.011	0.004	0.005	0.004	0.004
M2Ca	0.870	0.881	0.924	0.800	0.823	0.804	0.929	0.917	0.843	0.827
M2Na	0.054	0.037	0.033	0.146	0.106	0.152	0.030	0.050	0.067	0.051
M2K	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.002	0.000	0.000
ΣM2	**0.999**	**1.000**	**0.999**	**0.999**	**0.999**	**0.999**	**1.000**	**1.000**	**1.000**	**1.000**
Cations	**3.998**	**3.999**	**3.999**	**3.998**	**3.999**	**3.998**	**4.000**	**4.000**	**4.001**	**4.001**
Mg#[3]	78.89	82.88	77.26	61.45	67.17	57.96	79.30	73.15	76.97	82.20
Adjectival modifiers Name	subsilicic diopside	diopside	subsilicic diopside	sodian diopside	sodian diopside	sodian diopside	diopside	titanian subsilicic diopside	chromian subsilicic diopside	ferroan chromian diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75
Crystal[1]	15mc	15mc	15mc	15mc	16mc	16mc	16mc	16mc	16mc	17mc
Location[2]	N	N2	NI	NI2	B	I	IB	N	N2	B
Type	C	C	C	C	C	A4	C	B5	B5	C
SiO_2	45.86	50.37	47.87	50.60	43.23	46.02	45.65	49.32	47.00	42.30
TiO_2	3.17	1.61	2.18	1.28	5.03	2.97	3.61	1.21	2.04	5.02
Al_2O_3	8.50	4.16	6.65	4.11	8.51	8.15	7.25	5.10	7.16	8.69
Cr_2O_3	0.79	0.45	1.01	0.59	0.02	0.55	0.18	0.01	0.01	0.03
$FeO_{(t)}$	6.29	5.65	5.57	5.09	7.55	6.82	7.27	11.84	12.43	8.93
MnO	0.10	0.11	0.08	0.12	0.14	0.15	0.09	0.42	0.43	0.12
MgO	12.89	15.55	13.91	15.55	11.38	12.89	12.54	10.07	8.83	10.82
CaO	21.36	21.34	21.63	21.65	22.44	21.45	22.76	20.08	19.46	21.18
Na_2O	0.81	0.61	0.73	0.60	0.78	0.80	0.54	1.89	2.19	1.52
K_2O	0.01	0.00	0.00	0.00	0.04	0.02	0.01	0.00	0.00	0.11
Total	**99.77**	**99.85**	**99.63**	**99.59**	**99.13**	**99.82**	**99.90**	**99.94**	**99.55**	**98.72**
TSi	1.700	1.850	1.770	1.861	1.630	1.706	1.701	1.849	1.774	1.599
TAl	0.300	0.150	0.230	0.139	0.370	0.294	0.299	0.151	0.226	0.387
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.071	0.030	0.060	0.039	0.008	0.062	0.019	0.074	0.092	0.000
M1Ti	0.088	0.044	0.061	0.036	0.143	0.083	0.101	0.034	0.058	0.143
$M1Fe^{3+}$	0.087	0.060	0.071	0.054	0.134	0.108	0.111	0.145	0.178	0.230
$M1Fe^{2+}$	0.018	0.000	0.013	0.002	0.075	0.019	0.067	0.184	0.175	0.017
M1Cr	0.023	0.013	0.029	0.017	0.001	0.016	0.005	0.000	0.000	0.001
M1Mg	0.712	0.852	0.767	0.852	0.640	0.712	0.697	0.563	0.497	0.610
ΣM1	**0.999**	**0.999**	**1.001**	**1.000**	**1.001**	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.090	0.113	0.089	0.100	0.029	0.085	0.049	0.043	0.039	0.022
M2Mn	0.003	0.003	0.002	0.004	0.005	0.005	0.003	0.013	0.014	0.004
M2Ca	0.848	0.840	0.857	0.853	0.907	0.852	0.909	0.807	0.787	0.858
M2Na	0.059	0.044	0.052	0.043	0.057	0.058	0.039	0.137	0.160	0.111
M2K	0.000	0.000	0.000	0.000	0.002	0.001	0.001	0.000	0.000	0.005
ΣM2	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**	**1.001**	**1.000**	**1.000**	**1.000**
Cations	**3.999**	**3.999**	**4.001**	**4.000**	**4.001**	**4.001**	**4.001**	**4.000**	**4.000**	**4.001**
Mg#[3]	78.50	83.12	81.60	84.52	72.89	77.06	75.43	60.21	55.91	68.31
Adjectival modifiers Name	chromian subsilicic diopside	ferroan chromian diopside	chromian diopside	chromian diopside	titanian subsilicic diopside	chromian subsilicic diopside	titanian subsilicic diopside	sodian diopside	sodian diopside	titanian sodian subsilicic diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75
Crystal[1]	17mc	18mc	18mc	18mc	19mc	19mc	19mc	19mc	20mc	21mc
Location[2]	N	B	I	N	B	I	I2	N	NN	N
Type	C	C	C	C	C	C	C	C	B5	B5
SiO_2	46.45	43.42	47.74	47.45	44.74	50.82	50.72	45.88	48.46	47.57
TiO_2	2.50	4.84	2.42	2.16	4.02	1.24	1.69	2.81	2.58	1.97
Al_2O_3	7.85	8.05	6.91	6.69	7.65	3.94	3.58	8.46	4.44	6.54
Cr_2O_3	0.76	0.00	0.34	0.02	0.00	0.54	0.17	0.24	0.01	0.05
$FeO_{(t)}$	6.38	7.44	6.45	10.92	7.32	5.54	5.89	7.70	8.02	11.85
MnO	0.13	0.12	0.12	0.28	0.11	0.13	0.11	0.14	0.17	0.38
MgO	12.94	11.79	13.29	10.03	12.23	15.36	15.19	11.83	13.08	9.32
CaO	20.83	22.50	21.47	20.29	23.02	21.42	22.02	21.04	22.49	20.04
Na_2O	0.92	0.56	0.82	1.84	0.51	0.73	0.48	1.15	0.50	2.02
K_2O	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.00
Total	**98.77**	**98.73**	**99.57**	**99.69**	**99.61**	**99.74**	**99.86**	**99.25**	**99.76**	**99.74**
TSi	1.736	1.644	1.770	1.780	1.674	1.868	1.869	1.713	1.811	1.790
TAl	0.264	0.356	0.230	0.220	0.326	0.132	0.131	0.287	0.189	0.210
TFe^{3+}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.082	0.003	0.072	0.076	0.011	0.038	0.024	0.085	0.006	0.080
M1Ti	0.070	0.138	0.067	0.061	0.113	0.034	0.047	0.079	0.073	0.056
$M1Fe^{3+}$	0.085	0.118	0.071	0.154	0.125	0.062	0.043	0.119	0.074	0.164
$M1Fe^{2+}$	0.019	0.076	0.045	0.147	0.068	0.008	0.047	0.051	0.119	0.176
M1Cr	0.022	0.000	0.010	0.001	0.000	0.016	0.005	0.007	0.000	0.002
M1Mg	0.721	0.665	0.735	0.561	0.682	0.841	0.834	0.659	0.729	0.523
ΣM1	**0.999**	**1.000**	**1.000**	**1.000**	**0.999**	**0.999**	**1.000**	**1.000**	**1.001**	**1.001**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.095	0.042	0.084	0.041	0.036	0.100	0.092	0.070	0.058	0.033
M2Mn	0.004	0.004	0.004	0.009	0.003	0.004	0.003	0.004	0.005	0.012
M2Ca	0.834	0.913	0.853	0.816	0.923	0.843	0.869	0.842	0.900	0.808
M2Na	0.067	0.041	0.059	0.134	0.037	0.052	0.035	0.083	0.036	0.147
M2K	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.000
ΣM2	**1.001**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**0.999**	**0.999**	**1.000**
Cations	**4.000**	**4.000**	**4.000**	**4.000**	**3.999**	**3.999**	**4.000**	**3.999**	**4.000**	**4.001**
Mg#[3]	78.37	73.81	78.61	62.13	74.86	83.18	82.09	73.30	74.39	58.37
Adjectival modifiers Name	chromian subsilicic diopside	titanian subsilicic diopside	diopside	sodian diopside	titanian subsilicic diopside	chromian diopside	diopside	subsilicic diopside	diopside	sodian diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-75	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A
Crystal[1]	21mc	1mc	1mc	1mc	2mc	2mc	4mc	5mc	5mc	5mc
Location[2]	NN	B	I	N	B	NN	N	I	I2	I2
Type	B5	C	A4	B5	C	B5?	A5	C	C	C
SiO_2	47.82	44.53	46.97	47.81	51.28	44.71	51.63	48.15	48.51	47.49
TiO_2	1.89	4.07	2.94	1.81	0.63	4.30	0.50	2.51	1.95	2.15
Al_2O_3	6.23	6.56	5.46	5.55	1.75	6.69	2.24	5.16	4.86	5.06
Cr_2O_3	0.00	0.00	0.39	0.00	0.00	0.03	0.00	0.01	0.00	0.00
$FeO_{(t)}$	10.40	6.80	6.02	9.73	12.08	6.92	9.38	7.53	6.95	6.80
MnO	0.29	0.10	0.06	0.39	0.56	0.07	0.56	0.11	0.14	0.10
MgO	10.63	12.48	13.54	10.86	10.80	12.45	14.16	12.72	13.43	13.72
CaO	20.47	24.22	23.85	22.52	22.07	24.05	20.71	23.08	23.31	22.65
Na_2O	1.67	0.42	0.39	1.12	1.20	0.41	0.71	0.61	0.57	0.55
K_2O	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**99.40**	**99.19**	**99.63**	**99.79**	**100.36**	**99.63**	**99.90**	**99.88**	**99.72**	**98.52**
TSi	1.795	1.793	1.773	1.840	1.673	1.748	1.793	1.927	1.674	1.919
TAl	0.205	0.207	0.227	0.160	0.290	0.239	0.207	0.073	0.295	0.081
TFe^{3+}	0.000	0.000	0.000	0.000	0.037	0.013	0.000	0.000	0.031	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.071	0.085	0.075	0.015	0.000	0.000	0.038	0.004	0.000	0.017
M1Ti	0.053	0.054	0.057	0.046	0.115	0.082	0.051	0.018	0.121	0.014
$M1Fe^{3+}$	0.148	0.171	0.191	0.090	0.127	0.104	0.148	0.121	0.111	0.088
$M1Fe^{2+}$	0.133	0.170	0.165	0.079	0.049	0.051	0.156	0.252	0.071	0.097
M1Cr	0.000	0.001	0.000	0.000	0.000	0.011	0.000	0.000	0.001	0.000
M1Mg	0.595	0.520	0.512	0.770	0.699	0.751	0.607	0.605	0.695	0.784
ΣM1	**1.000**	**1.001**	**1.000**	**1.000**	**0.990**	**0.999**	**1.000**	**1.000**	**0.999**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.046	0.039	0.023	0.033	0.000	0.019	0.001	0.006	0.003	0.107
M2Mn	0.009	0.012	0.012	0.004	0.003	0.002	0.012	0.018	0.002	0.018
M2Ca	0.823	0.791	0.811	0.924	0.975	0.951	0.905	0.888	0.965	0.825
M2Na	0.122	0.157	0.154	0.038	0.031	0.028	0.082	0.087	0.030	0.051
M2K	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ΣM2	**1.000**	**1.094**	**1.001**	**0.999**	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**	**0.999**
Cations	**4.000**	**4.095**	**4.001**	**3.999**	**3.990**	**3.999**	**4.000**	**4.000**	**4.000**	**3.999**
Mg#[3]	64.53	57.78	57.46	79.22	76.64	80.06	66.56	61.48	76.29	72.86
Adjectival modifiers Name	sodian diopside	sodian diopside	sodian diopside	diopside	titanian subsilicic diopside	chromian subsilicic diopside	augite	diopside	titanian subsilicic diopside	ferroan portador de diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core;
IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A
Crystal[1]	5mc	5mc	6mc	7mc	7mc	7mc	7mc	7mc	8mc	9mc
Location[2]	I3	IB	N	B	I	N	N2	NI	I	B
Type	C	C	A5	C	C	B5?	B5?	C	C	C
SiO_2	49.27	48.70	47.75	44.13	44.60	45.37	47.47	45.40	49.19	48.47
TiO_2	2.00	2.91	2.01	4.23	4.15	2.98	1.97	3.79	1.91	2.68
Al_2O_3	3.16	3.78	4.92	7.03	6.59	7.85	5.79	6.76	4.47	3.87
Cr_2O_3	0.06	0.00	0.00	0.00	0.04	0.00	0.00	0.46	0.59	0.00
$FeO_{(t)}$	5.50	5.77	7.64	7.00	7.19	9.42	9.49	6.37	5.10	5.80
MnO	0.10	0.08	0.17	0.08	0.10	0.25	0.36	0.12	0.10	0.08
MgO	15.13	14.23	13.61	12.88	12.46	10.48	11.28	12.98	14.70	14.55
CaO	22.82	24.03	21.72	22.95	24.33	22.46	21.64	22.52	22.76	23.41
Na_2O	0.44	0.34	0.63	0.44	0.42	0.95	1.00	0.50	0.47	0.36
K_2O	0.01	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.03	0.00
Total	**98.50**	**99.85**	**98.45**	**98.80**	**99.88**	**99.76**	**99.00**	**98.89**	**99.31**	**99.22**
TSi	1.793	1.801	1.782	1.840	1.806	1.795	1.662	1.666	1.704	1.792
TAl	0.207	0.199	0.218	0.139	0.165	0.205	0.312	0.290	0.296	0.208
TFe^{3+}	0.000	0.000	0.000	0.021	0.029	0.000	0.026	0.044	0.000	0.000
ΣT	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.020	0.014	0.005	0.000	0.000	0.013	0.000	0.000	0.052	0.050
M1Ti	0.070	0.054	0.061	0.056	0.081	0.057	0.120	0.117	0.084	0.056
$M1Fe^{3+}$	0.090	0.117	0.132	0.078	0.056	0.123	0.132	0.129	0.144	0.119
$M1Fe^{2+}$	0.114	0.072	0.035	0.022	0.076	0.044	0.025	0.051	0.133	0.141
M1Cr	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.001	0.000	0.000
M1Mg	0.706	0.743	0.767	0.842	0.787	0.763	0.723	0.694	0.587	0.635
ΣM1	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**0.992**	**1.000**	**1.001**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.031	0.027	0.046	0.051	0.018	0.073	0.037	0.000	0.019	0.040
M2Mn	0.004	0.004	0.003	0.003	0.003	0.005	0.003	0.003	0.008	0.011
M2Ca	0.921	0.927	0.910	0.913	0.955	0.875	0.926	0.974	0.904	0.875
M2Na	0.044	0.041	0.040	0.032	0.025	0.046	0.032	0.031	0.069	0.073
M2K	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000
ΣM2	**0.999**	**1.000**	**0.999**	**1.001**	**1.000**	**1.000**	**0.999**	**1.001**	**1.000**	**1.000**
Cations	**3.999**	**4.000**	**3.999**	**4.001**	**4.000**	**4.000**	**3.999**	**3.993**	**4.000**	**4.001**
Mg#[3]	75.03	77.48	78.27	83.04	81.47	76.07	76.67	75.60	66.48	67.91
Adjectival modifiers							titanian subsilicic	titanian subsilicic	subsilicic	
Name	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside	diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A5. Major element concentrations of pyroxene from the investigated dikes. Structural formula calculated on the basis of 6 oxygens.

Dike	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A
Crystal[1]	9mc	9mc	9mc	10mc	10mc	10mc	11mc
Location[2]	I	N	NI	B	N	N2	N
Type	B5	B5	C	A4	B5	B5?	C
SiO_2	49.08	47.70	48.30	46.74	47.34	47.05	49.73
TiO_2	1.97	1.86	2.11	3.69	1.88	2.00	1.67
Al_2O_3	4.50	5.58	5.13	5.32	6.53	6.80	4.00
Cr_2O_3	0.40	0.01	0.61	0.00	0.02	0.00	0.00
$FeO_{(t)}$	5.05	9.54	5.31	6.79	11.99	12.02	6.53
MnO	0.09	0.33	0.07	0.13	0.38	0.36	0.12
MgO	14.76	11.36	14.47	13.62	9.21	9.11	13.96
CaO	22.86	21.68	22.87	23.06	19.48	20.09	23.31
Na_2O	0.42	1.00	0.46	0.52	2.14	2.11	0.53
K_2O	0.01	0.02	0.01	0.02	0.01	0.00	0.01
Total	**99.14**	**99.08**	**99.34**	**99.89**	**98.99**	**99.54**	**99.86**
TSi	1.706	1.823	1.805	1.821	1.799	1.791	1.737
TAl	0.294	0.177	0.170	0.179	0.201	0.209	0.233
TFe^{3+}	0.000	0.000	0.026	0.000	0.000	0.000	0.030
ΣT	**2.000**	**2.000**	**2.001**	**2.000**	**2.000**	**2.000**	**2.000**
M1Al	0.005	0.018	0.000	0.018	0.047	0.015	0.000
M1Ti	0.107	0.053	0.075	0.055	0.053	0.059	0.103
$M1Fe^{3+}$	0.096	0.070	0.071	0.070	0.122	0.092	0.094
$M1Fe^{2+}$	0.051	0.030	0.047	0.029	0.140	0.017	0.048
M1Cr	0.014	0.017	0.000	0.012	0.000	0.018	0.000
M1Mg	0.727	0.812	0.808	0.816	0.639	0.800	0.755
ΣM1	**1.000**	**1.000**	**1.001**	**1.000**	**1.001**	**1.001**	**1.000**
M2Mg	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$M2Fe^{2+}$	0.054	0.058	0.038	0.057	0.039	0.056	0.039
M2Mn	0.004	0.003	0.002	0.003	0.010	0.002	0.004
M2Ca	0.907	0.904	0.934	0.909	0.876	0.908	0.918
M2Na	0.036	0.034	0.026	0.030	0.073	0.033	0.037
M2K	0.000	0.001	0.000	0.000	0.001	0.000	0.001
ΣM2	**0.999**	**0.999**	**0.999**	**0.999**	**1.000**	**1.000**	**1.000**
Cations	**3.999**	**3.999**	**4.001**	**3.999**	**4.001**	**4.001**	**4.000**
Mg#[3]	78.34	83.71	81.62	83.95	67.98	82.90	78.16
Adjectival modifiers	romian titani	titanian					titanian
Name	subsilicic	chromian		chromian		chromian	subsilicic
	diopside	diopside	diopside	diopside	diopside	diopside	diopside

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim; NN = crystal inclusion in macrocrystal core.

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A
Crystal[1]	10mic	2mc	2mc	2mc	2mc	2mc	2mc	3mc	3mc	3mc
Zone[2]	N	B2	I2	I4	I6	N2	N	B2	I	I2
Type	C	C	C	C	C	C	C	C	C	C
Mg#[3]	77.1	75.67	76.92	78.32	79.34	71.72	67.18	74.32	81.47	78.28
Sc	74.8	84.6	84	96.9	99.6	81.7	81.9	70.1	91.3	112
V	268	393	306	303	259	347	314	344	207	351
Cr	836	1140	2867	4729	3213	406	1562	91.6	1591	3305
Mn	1004	1033	819	771	715	834	846	994	790	854
Co	38.1	41.1	31.4	33.3	30.1	34.4	31.8	30.5	31.7	35.2
Ni	178	239	133	173	157	115	109	124	161	145
Cu	2.44	1.68	1.38	1.48	0.74	1.56	1.54	2.04	0.81	0.59
Zn	35.1	66.6	30.9	27	27	37.7	31.7	47.4	29.8	30.6
Ga	11.2	18.3	13.2	12.2	11.8	19	15.2	20	8.99	15.1
Sr	204	260	163	161	204	203	180	439	191	178
Y	25.9	28.6	20.6	19.8	20.5	28.1	25.3	52.7	16.4	23.3
Zr	149	212	85	90	120	166	138	456	101	143
Nb	1.51	5.14	0.564	0.486	0.92	1.71	1.65	6.11	0.591	1.4
Ba	1.08	5.39	b.d.	b.d.	b.d.	b.d.	0.35	6.84	b.d.	b.d.
La	14.5	20.1	8.03	9.2	12.1	12.3	11	65.3	9.55	10.9
Ce	43.4	56.9	24.8	28.6	37.4	43.3	39.4	160	30.3	34.9
Pr	6.75	9.83	4.51	4.86	6.01	7.75	6.34	23.1	4.6	6.11
Nd	37.3	49.8	25.1	27.1	33.2	43.7	36.4	110	26.4	35.2
Sm	8.36	11.3	7.15	5.87	7.84	11.7	8.5	23.1	6.46	7.62
Eu	2.19	3.72	2.18	2.23	2.44	3.37	3.06	6.85	2.42	2.72
Gd	8.9	9.44	6.42	5.52	8.07	9.04	8.08	17.7	5.68	7.11
Tb	1.07	1.3	0.846	0.91	1.16	1.57	1.18	2.12	0.793	1.11
Dy	5.77	6.87	4.41	3.85	5.1	7.43	5.82	10.5	3.87	4.67
Ho	1.12	1.26	0.82	0.82	0.931	1.22	0.907	1.87	0.666	0.93
Er	2.11	2.83	1.94	1.79	1.84	3.14	2.18	4.78	1.44	1.83
Tm	0.333	0.288	0.183	0.265	0.186	0.31	0.269	0.537	0.245	0.199
Yb	2.05	2.05	1.64	1.19	1.63	2.5	2.22	4.41	1.42	1.72
Lu	0.219	0.223	0.227	0.237	0.118	0.319	0.2	0.626	0.179	0.099
Hf	6.01	6.65	3.7	4.9	4	6.78	5.25	16.4	3.85	3.98
Ta	0.227	0.425	0.116	0.115	0.145	0.497	0.283	1.16	0.113	0.226
Pb	0.121	0.138	b.d.	b.d.	0.102	b.d.	0.132	6.79	0.078	b.d.
Th	0.384	0.427	0.09	0.165	0.146	0.266	0.19	1.2	0.116	0.158
U	b.d.	0.018	0.026	b.d.	0.023	0.034	0.037	0.275	0.014	b.d.

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core;

IB = middle sect NN = crystal inclusion in the core macrocrystal.

[3] Mg# = (Mg/Fe_t+Mg)x100 in a.p.f.u. Fe_t is all iron of structural formula.

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A
Crystal[1]	3mc	4mc	4mc	4mc	4mc	5mc	5mc	5mc	6mic	8mc
Zone[2]	N	IB	N	NI	NI	B	I	N	I	B
Type	C	C	B2	A2	C	C	A2	B1	C	C
Mg#[3]	77.17	72.38	68.46	82.99	75.56	74.84	82.91	64.88	76.43	70.16
Sc	77.3	87.6	64	66.5	96.1	86.8	80	79.5	79.4	85.9
V	282	325	313	336	266	349	270	488	255	334
Cr	343	55.1	136	168	817	410	5090	663	1292	46
Mn	1042	931	1064	1106	775	839	919	1705	858	902
Co	39.4	29.8	33.9	40.4	30.8	30.8	33.5	34.3	30.7	33.6
Ni	115	101	29	35.8	145	124	256	50.1	162	104
Cu	1.63	1.43	2.07	1.74	1.23	2.7	1.76	3.98	1.06	2.58
Zn	41	40.7	149	175	34.3	33.7	34.1	103	31.5	34.6
Ga	12.6	17.4	18.1	23.6	12.2	16.8	10.2	17.7	13	16.4
Sr	158	281	35.6	35.3	214	363	169	17.4	230	297
Y	21	41.3	18	17.7	23.4	38.5	19.3	80.3	22.8	34.1
Zr	108	408	191	210	161	311	67.4	107	154	324
Nb	0.72	4.96	0.284	0.197	1.21	3.52	0.503	0.198	1.36	3.63
Ba	b.d.	9.8	b.d.	0.38	b.d.	4.31	1.32	b.d.	0.62	0.77
La	8.48	38.7	13.3	13.6	13.5	48.6	8.37	19.9	14.9	29.3
Ce	30.1	102	52.6	54	42.6	117	28.5	84.2	43.6	82.1
Pr	5.55	14.4	8.99	9.54	7.03	16.4	4.8	15.1	6.82	12.8
Nd	30.5	71.5	47.4	50	38	75.6	24	77.5	40.2	58.6
Sm	7.37	16.5	12.1	12.1	9.77	17.2	6.01	21.8	9.98	14.6
Eu	2.95	5.43	2.74	2.75	3.23	5.26	1.88	2.39	2.87	4.85
Gd	7.95	13	9.13	10.4	7.94	14.1	5.2	17.8	7.41	11.4
Tb	0.95	2.31	1.18	1.25	1.17	1.81	0.81	2.89	1.02	1.84
Dy	4.86	10.5	4.88	5.4	5.93	9.58	4.77	15.6	5.42	8.53
Ho	0.83	1.74	0.76	0.85	0.99	1.81	0.741	3.05	0.87	1.46
Er	2.35	4.22	1.62	1.57	2.03	3.4	1.79	7.68	2.51	3.71
Tm	0.332	0.521	0.157	0.152	0.276	0.434	0.32	1.09	0.279	0.349
Yb	1.51	3.7	0.64	0.72	1.45	2.37	2.05	7.82	1.54	1.95
Lu	0.234	0.494	0.088	0.092	0.192	0.249	0.28	0.91	0.241	0.276
Hf	4.32	15.2	8.53	8.27	5.81	10.7	2.97	5.57	5.33	12.5
Ta	0.066	0.717	0.034	0.052	0.264	0.765	0.117	b.d.	0.298	0.713
Pb	b.d.	0.248	0.379	0.45	0.114	b.d.	0.062	0.397	b.d.	0.198
Th	0.136	1.26	0.173	0.126	0.181	1.3	0.216	0.118	0.243	0.57
U	b.d.	0.129	0.051	0.018	0.02	0.141	0.031	0.031	0.039	0.07

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core;

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[3] Mg# = (Mg/Fe_t+Mg)x100 in a.p.f.u. Fe_t is all iron of structural formula.

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-64A	MT-64A	MT-64A	MT-64A	MT-64A	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F
Crystal[1]	8mc	8mc	9mc	9mc	9mc	1mc	1mc	1mc	1mc	2mc
Zone[2]	I	N	B	I	N	B	I	N	NI	N
Type	A2	A1	C	A2	A1	C	C	C	C	C
Mg#[3]	81.26	88.23	73.98	81.13	87.42	75.68	78.25	78.7	74.4	73.48
Sc	77.6	37.3	88.7	76.6	39.3	83.1	89.5	72.1	77.5	94.5
V	247	167	316	265	95,920	303	264	283	268	332
Cr	4245	4722	428	3061	1274	1181	3525	741	1611	2590
Mn	778	841	991	843	1052	780	730	882	869	822
Co	32.2	30.4	35.5	33.5	44.5	31.6	29.7	34.4	34.4	33.2
Ni	278	224	157	221	202	175	154	115	125	132
Cu	1.47	1	1.24	1.08	1.49	1.77	1.02	1.24	0.75	1.3
Zn	38.2	24.7	43.1	27.8	31.3	30.1	25.6	29.3	29.9	29.7
Ga	9.69	2.73	17.2	11.3	2.73	15.4	11.4	10.8	9.8	14.1
Sr	177	71.1	320	209	71.6	271	189	153	147	181
Y	17.1	7.52	34.3	19.9	6.93	28.5	18	16.8	15.7	21.5
Zr	78.6	7.16	292	110	5.14	191	90.9	78.5	70.4	108
Nb	0.73	b.d.	2.83	0.95	0.021	1,670	0.671	0.613	0.514	0.993
Ba	b.d.	b.d.	1.5	b.d.	b.d.	1.19	0.141	0.224	b.d.	0.65
La	8.92	1.38	27.5	11.2	0.87	21.5	10.4	6.69	6.76	9.87
Ce	28.3	5.62	73.4	34.1	4.08	63.6	33.8	22.9	21.9	34
Pr	4.51	1.17	11.1	5.41	0.85	9.77	5.67	3.93	3.9	5.76
Nd	23.6	6.46	58.7	27	5.39	51.9	30.7	24.5	22.6	32.6
Sm	6.32	2.3	15.4	7.71	1.93	12.5	8.18	6.03	6.42	8.62
Eu	2.07	0.71	4.36	2.51	0.497	3.81	2.72	2.38	2.25	2.9
Gd	4.98	2.14	11.9	6	1.93	10.1	6.24	5.45	5.47	7.55
Tb	0.8	0.274	1.59	0.91	0.249	1.42	0.863	0.799	0.739	1,012
Dy	4.42	1.59	7.11	4.8	1.35	7.84	4.87	4.5	4.09	5.53
Ho	0.698	0.358	1.32	0.83	0.3	1.23	0.783	0.679	0.708	1.03
Er	1.72	0.74	2.64	1.71	0.67	2.74	1.95	1.44	1.4	1.92
Tm	0.115	0.068	0.61	0.208	0.04	0.288	0.25	0.176	0.19	0.268
Yb	1.21	0.57	2.71	1.14	0.59	1.92	1.38	1.28	1.11	1.64
Lu	0.202	0.108	0.341	0.196	0.085	0.262	0.187	0.157	0.219	0.19
Hf	3.22	0.25	9.61	3.58	b.d.	7.62	3.6	3.23	2.36	4.78
Ta	0.113	b.d.	0.485	0.14	b.d.	0.323	0.121	0.121	0.102	0.199
Pb	0.113	0.098	0.124	b.d.	0.337	0.152	0.121	0.103	0.085	0.055
Th	0.165	b.d.	0.61	0.304	0.051	0.406	0.133	0.043	0.058	0.128
U	0.021	b.d.	0.088	b.d.	0.009	0.059	0.024	0.008	b.d.	0.026

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core;

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[3] Mg# = (Mg/Fe_t+Mg)x100 in a.p.f.u. Fe_t is all iron of structural formula.

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F	MT-74F
Crystal[1]	4mc	4mc	4mc	5mc	5mc	5mc	6mc	6mc	6mc	7mc
Zone[2]	I	I	N	B	I2	N	B	I	N	B
Type	A2	C	B1	C	C	B1	C	A2	D	C
Mg#[3]	82.32	71.92	60.29	72.55	75.27	64	77.75	84.34	61.63	74.34
Sc	87.4	83.4	109.3	86.8	83	51.7	85	82.7	48.5	68
V	232	326	324	315	232	173	324	215	163	240
Cr	2476	622	124	709	2740	1209	376	3894	1134	780
Mn	751	790	2520	785	812	3281	873	755	3079	713
Co	31	31.6	31.7	30.8	31.7	103	35.2	31.7	96.4	25.6
Ni	163	150	30.3	150	264	287	152	304	270	149
Cu	0.91	1.5	0.79	2.71	1.08	0.83	1.86	0.79	0.78	5.27
Zn	25.6	26.3	206	30.1	27.8	410	35.7	21.3	385	26.3
Ga	10.1	15.2	18.8	16.8	9.69	15.7	15	8.28	14.7	12.2
Sr	203	273	25.5	274	200	0.073	269	188	0.068	559
Y	17.7	28	58.7	30.3	18.7	10.5	28.4	13.5	9.88	40.5
Zr	112	251	63.1	243	103	1.48	237	72.5	1.39	169
Nb	0.898	2.53	0.291	2.59	0.834	0.948	2.17	0.48	0.889	1.75
Ba	0.13	0.65	b.d.	3.22	b.d.	b.d.	0.41	0.129	b.d.	7.38
La	10.5	22.9	9.3	27.4	10.4	0.019	22.9	8.55	0.018	77.7
Ce	33.9	70.7	39.8	72.7	32.6	0.13	69.8	26.7	0.122	173
Pr	5.6	10.4	7.62	10.7	5.36	0.033	10.4	4.45	0.031	21.6
Nd	32.1	58.7	45.3	54.5	27.2	0.129	53.9	23.8	0.121	93.8
Sm	6.55	12.2	14.1	13.7	7.23	0.26	11.8	5.05	0.241	17.6
Eu	2.31	4.99	4.31	3.77	2.25	0.064	3.86	2.01	0.06	5.15
Gd	5.56	10.6	15.9	10.1	6.07	0.45	9.69	4.64	0.42	12.5
Tb	0.768	1.23	2.68	1.53	0.82	0.171	1.36	0.617	0.161	1.5
Dy	4.15	7.4	14.4	7.72	4.32	1.36	7.3	3.43	1.27	7.29
Ho	0.657	1.06	2.74	1.28	0.687	0.347	1.34	0.585	0.325	1.34
Er	1.95	2.92	6.24	3.46	1.78	1.26	3.02	1.46	1.18	3.14
Tm	0.185	0.323	0.856	0.389	0.207	0.339	0.319	0.186	0.319	0.38
Yb	1.5	2.29	5.07	1.6	1.36	3.98	2.29	1	3.74	1.79
Lu	0.116	0.206	0.669	0.398	0.163	0.618	0.304	0.093	0.579	0.283
Hf	4.52	8.7	4.74	8.41	3.28	0.29	8.33	2.87	0.27	4.62
Ta	0.2	0.422	0.027	0.539	0.094	0.091	0.431	0.093	0.085	0.205
Pb	0.074	b.d.	0.65	0.256	0.113	b.d.	0.234	0.102	b.d.	0.17
Th	0.129	0.53	b.d.	0.572	0.169	b.d.	0.449	0.069	b.d.	1.35
U	0.042	0.11	b.d.	0.106	0.01	b.d.	0.039	0.011	b.d.	0.35

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[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core;

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[3] Mg# = (Mg/Fe_t+Mg)x100 in a.p.f.u. Fe_t is all iron of structural formula.

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-74F	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E
Crystal[1]	7mc	1mc	1mc	2mc	2mc	3mc	3mc	4mc	4mc	5mc
Zone[2]	N	B2	N2	I	N	I2	N	IB	N	B
Type	C	C	C	C	C	A4	B3	C	A3	C
Mg#[3]	81.64	68.08	79.42	71.65	78.91	83.19	62.47	74	81.33	75.68
Sc	79.2	67.1	96.6	81.3	77.7	39.8	36.4	41.7	82.7	80.5
V	206	289	199	269	174	314	303	286	239	227
Cr	2314	58.7	459	566	291	348	242	93.7	726	531
Mn	849	755	813	783	898	1599	3715	1320	698	786
Co	34.3	31.3	36.4	30.9	34.9	25.9	22.7	27.9	30.2	31.5
Ni	166	48.6	118	121	139	73.6	42	52.7	153	151
Cu	1.2	2.18	0.97	1.29	1.57	1.35	1.45	1.5	0.94	1.04
Zn	30.1	30.2	31.4	35.8	34.8	81.7	186	75.7	26.8	34.5
Ga	8.61	22.6	11.7	19.6	10.9	20.6	17.3	22.1	16.9	15.4
Sr	201	322	219	254	240	513	612	483	277	247
Y	13.9	40.6	25	31.7	27.1	35.4	22.2	37.1	27.2	29.1
Zr	79.3	465	226	438	299	650	786	630	338	311
Nb	0.431	7.26	1.57	9.98	2.64	9.61	6.28	8.71	4.21	3.22
Ba	0.44	2.46	b.d.	b.d.	0.49	b.d.	2.11	0.76	0.23	1.94
La	8.09	58.2	17	41.2	24.3	48.1	46.9	52.2	25.5	29.3
Ce	28.8	132	49.3	106	70.1	116	122	132	74.8	87
Pr	4.47	18.2	7.35	14.5	9.51	14.7	11.3	17.3	10.8	12.4
Nd	24.8	79	37.8	67.6	45.9	66.9	40.5	77.7	57.2	60.8
Sm	6.33	17	9.74	14.4	8.73	13.4	6.99	17.1	12.6	12.3
Eu	2.06	5.36	2.98	4.77	3.12	4.56	2.37	5.22	3.83	2.95
Gd	4.8	11.7	8.48	11.7	8.38	12.2	5.51	14.3	10.6	9.91
Tb	0.709	1.71	0.95	1.58	1.04	1.67	0.81	1.72	1.51	1.4
Dy	3.53	9.2	4.85	8.2	5.62	8.25	2.56	9.02	5.86	8.3
Ho	0.48	1.6	0.93	1.27	1.22	1.28	0.82	1.43	1.07	1.52
Er	1.12	3.7	2.2	2.82	2.34	3.32	2.38	3.55	2.14	3.44
Tm	0.125	0.272	0.24	0.334	0.149	0.393	0.358	0.437	0.255	0.238
Yb	1.07	2.18	1.36	2.13	2.12	3.06	3.47	3.47	1.82	2.04
Lu	0.111	0.332	0.121	0.289	0.265	0.514	0.69	0.187	0.265	0.048
Hf	3.64	12.8	7.89	12.3	8.23	14.5	16.8	16.1	13.5	10
Ta	0.088	1.34	0.2	1.6	0.362	1.45	0.258	1.41	0.82	0.4
Pb	b.d.	0.03	0.1	0.092	0.175	0.182	0.61	0.33	0.156	0.19
Th	0.082	2.39	0.228	1.89	0.53	0.89	0.62	1.15	0.55	0.49
U	0.012	0.174	0.06	0.105	0.113	0.077	0.099	0.088	0.025	0.162

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core;

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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT-74E	MT73C	MT73C	MT73C
Crystal[1]	5mc	6mc	6mc	6mc	7mc	8mc	8mc	10mc	10mc	10mc
Zone[2]	N	I	I2	N	B	B	N	B	I	N
Type	B3	C	C	B3	C	C	C	C	B4	A3
Mg#[3]	56.24	71.72	73.14	58.96	71.65	79.3	81.45	71.51	58.87	83.78
Sc	9,560	34.3	39	20.8	70.5	90.6	79	84.9	25.7	124
V	365	234	275	348	206	210	233	299	395	205
Cr	8.34	9.95	59.8	50.2	148	2444	1432	951	80.2	5337
Mn	3736	1156	984	3921	886	650	742	1045	4416	641
Co	23	26.1	29.5	25.7	32.6	26.5	30.5	35.8	27.3	28.6
Ni	4.96	9.32	59.8	38.2	128	139	137	158	42.6	215
Cu	0.6	0.83	1.2	0.59	b.d.	2.79	1.02	b.d.	b.d.	b.d.
Zn	165	50.8	34.4	193	29.5	49.3	27.2	34.3	175	24.7
Ga	20.2	17.1	19.9	16.6	12.2	10.5	13.9	b.d.	b.d.	b.d.
Sr	1088	365	352	663	273	171	229	326	831	324
Y	19.1	27	45.4	19.5	29.2	17.1	22.6	38.5	25.2	29.3
Zr	554	377	443	664	345	166	215	386	662	257
Nb	6.24	3.88	6.2	3.63	3.14	2.36	2.19	5.61	4.28	3.63
Ba	0.36	0.22	0.39	b.d.	b.d.	b.d.	b.d.	0.43	b.d.	0.57
La	39.7	30.3	50.9	42	27.1	14.5	17.7	36.1	44.3	36.9
Ce	88.3	82.6	142	83.3	73.3	41.6	50.8	113	108	113
Pr	9.54	11.9	20.2	9.03	10.2	6.18	6.96	15.7	11.4	14.1
Nd	34.1	54	89.7	33.1	53.6	33.7	34.9	71.7	42.7	61.3
Sm	5.26	11.6	18.5	5.12	8.2	8.06	10.3	15.5	6.17	14.1
Eu	1.67	3.87	5.36	1.82	2.88	3.03	2.99	4.58	2.46	4.08
Gd	4.38	8.76	13.7	4.45	11.3	6.85	6.18	11.9	6.5	9.87
Tb	0.576	1.22	1.92	0.653	1.28	0.72	1.07	1.48	0.797	1.31
Dy	3.75	6.94	9.71	3.12	7.6	4.56	5.49	7.59	3.97	7.59
Ho	0.78	1.17	1.91	0.704	1.28	0.67	0.88	1.56	0.94	1
Er	1.87	2.71	4.22	1.99	1.78	2.33	2.44	4.1	2.62	2.72
Tm	0.285	0.331	0.517	0.364	0.29	0.13	0.353	0.302	0.361	0.18
Yb	3.31	2.12	3.2	3.98	1.32	1.41	1.84	2.5	3.04	1.26
Lu	0.539	0.265	0.398	0.688	0.32	0.225	0.169	0.292	0.62	0.152
Hf	12.2	12.3	11.3	14	8.42	5.52	5.85	8.61	12.8	8.47
Ta	0.425	0.671	1.23	0.246	0.52	0.197	0.44	1.22	0.415	0.611
Pb	0.238	0.116	b.d.	0.57	0.49	0.081	0.3	0.152	0.357	0.076
Th	0.152	0.383	1.56	0.12	0.56	0.28	0.5	1.65	0.121	1.5
U	b.d.	0.061	0.077	b.d.	b.d.	0.044	0.065	0.082	0.046	0.123

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

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[3] Mg# = (Mg/Fe_t+Mg)x100 in a.p.f.u. Fe_t is all iron of structural formula.

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT73C	MT73C	MT73C	MT73C	MT73C	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B
Crystal[1]	10mc	4mc	4mc	4mc	4mc	2mc	2mc	2mc	2mc	2mc
Zone[2]	N2	B	B2	N	NI	B	B	I	I	N
Type	A3	C	C	B3	B4	C	C	B4	B4	A3
Mg#[3]	79.93	78.53	72.47	59.79	59.24	72.2	72.2	50.72	61.9	81.28
Sc	135	88.4	26	19	20.6	9.28	22.6	8.76	94	90.6
V	147	179	262	354	327	208	215	212	218	150
Cr	3332	1624	31.7	16.4	61.4	8.78	7.12	19.6	2688	160
Mn	741	913	1651	4608	4613	1538	931	5930	881	1115
Co	31.7	32.9	24.3	24.6	24.2	17.9	21	21.9	27.8	22.4
Ni	171	160	33	45.1	41.4	27.9	28.3	50.4	138	66
Cu	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Zn	19.9	23.9	71.7	223	185	33.9	41	193	27.2	49.9
Ga	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Sr	328	224	515	576	663	1020	495	275	240	491
Y	25.4	25.1	31.1	23.5	22.2	48.7	44.6	14.5	30.1	24.5
Zr	180	227	508	855	618	560	462	711	223	472
Nb	0.95	1.74	4.56	3.83	3.04	33,600	13,180	1.76	2.67	5.34
Ba	0.53	0.26	b.d.	b.d.	b.d.	285	1.96	0.15	0.35	0.67
La	31.3	15.6	34.6	36.8	40.5	134	87.7	27.3	27.6	30.6
Ce	99.2	56.1	104	92.5	85.4	270	210	60.4	78.9	85.1
Pr	13.1	8.28	13.4	10.1	8.86	33.8	31.1	6.3	10.9	12.7
Nd	59.3	43.2	58.2	36.7	33.5	120	110	18.6	52.4	51.6
Sm	10.9	9.72	13.4	4.9	4.67	19.1	19.7	3.36	9.94	11.3
Eu	3.82	2.48	3.58	1.79	1.54	5	5.24	0.88	3.14	3.06
Gd	8.92	6.92	11.3	4.92	4.98	14.7	14.9	1.53	7.08	8.11
Tb	1.04	1.1	1.4	0.59	0.678	2.17	1.33	0.263	1.47	1.03
Dy	5.09	6.6	7.31	3.31	3.45	12.7	11.1	2.93	6.62	6.08
Ho	0.96	0.82	1.22	0.659	0.71	2.21	1.82	0.423	0.97	0.99
Er	2.53	2.69	2.85	2.86	2.45	4.2	4.15	2.47	2.18	2.6
Tm	0.348	0.313	0.462	0.455	0.378	0.67	0.66	0.371	0.263	0.313
Yb	1.49	1.65	3.34	5.38	3.2	4.28	2.91	4.47	2.59	2.07
Lu	0.195	0.213	0.431	0.794	0.522	0.59	0.434	0.913	0.258	0.235
Hf	7.45	6.21	13.6	16.5	11.3	11	11.4	13.3	5.7	12.8
Ta	0.235	0.363	1.03	0.308	0.231	3.92	3.07	0.135	0.48	1.25
Pb	b.d.	0.064	0.179	0.334	0.246	0.471	0.086	0.288	0.045	0.139
Th	0.755	0.457	0.6	0.125	0.203	15.1	3.12	0.188	0.7	0.437
U	0.017	0.047	0.067	0.037	b.d.	2.32	0.292	0.023	0.018	0.047

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[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core;

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[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B
Crystal[1]	2mc	4mc	4mc	4mc	4mc	4mc	4mc	5mc	5mc	5mc
Zone[2]	N	B	I	I	I	IB	N	B	I	I
Type	A3	C	A4	A4	B4	A4	B3	C	A4	C
Mg#[3]	81.28	73.06	65.77	65.77	68.65	78.33	52.55	71.58	76.36	67.68
Sc	63.8	16.7	22.4	16.6	13.5	69.6	17.1	26.5	93.3	27.8
V	173	153	236	311	216	163	348	287	283	284
Cr	548	3.02	7.25	b.d.	b.d.	1881	b.d.	8.7	3051	11.7
Mn	1218	869	1234	1480	1352	607	5126	1617	945	1539
Co	22.5	21.6	20.5	21	16.4	21.6	18.9	30.6	30	24.9
Ni	95.5	27.2	22.2	10.6	11.7	97.5	b.d.	41.6	113	32.4
Cu	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Zn	47.9	37.8	46.6	58.9	65.4	24.6	214	46.6	29.2	54.2
Ga	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Sr	419	649	544	506	582	208	274	610	253	441
Y	23.3	52.5	51.4	43.2	34.9	23.2	14.7	62.6	25.4	29.6
Zr	316	373	676	847	594	195	839	668	254	469
Nb	4.78	22.1	8.13	17.2	8.14	2.81	1.8	22.3	4.17	6.46
Ba	3.99	71.7	0.39	0.3	0.28	0.38	0.117	8.72	0.91	b.d.
La	24.2	141	55.1	54.6	43.6	19.6	35.6	82.3	28.5	40.9
Ce	73.3	330	136	146	122	45.7	65.1	217	101	138
Pr	10.5	36.1	20.9	21.7	17.3	7.91	6.7	36.5	14	18.1
Nd	44.5	139	88.8	89.4	67.2	37.4	21.5	142	56.8	73.9
Sm	8.96	21.8	18.7	18.8	13.8	8.36	3.26	29.4	11.6	12.8
Eu	3.13	5.66	5.63	5.6	4.46	2.63	0.89	9.24	3.26	4
Gd	10	14.8	14.3	15.1	8.14	7.32	2.47	24.6	8.73	12.5
Tb	1.24	1.93	2.18	2.22	1.36	0.93	0.344	2.74	1.38	1.69
Dy	7.4	10.8	12.3	10.7	6.34	5.67	3.65	13.7	6.99	8.7
Ho	1.25	1.43	2	2	1.21	0.77	0.73	2.77	0.94	1.43
Er	1.81	4.81	4.12	5.02	2.83	2.13	1.81	6.1	2.07	3.1
Tm	0.308	0.87	0.52	0.49	0.348	0.255	0.413	0.62	0.251	0.324
Yb	1.82	4.03	3.48	3.71	2.78	1.12	4.11	4.13	1.79	2.68
Lu	0.282	0.47	0.514	0.509	0.492	0.209	1.22	0.56	0.171	0.313
Hf	8.36	8.1	13.8	18.5	13	5.96	17.7	14.7	7.99	11.6
Ta	0.6	2.25	1.68	3.87	1.32	0.439	0.057	3.97	0.82	1.53
Pb	0.086	0.87	0.125	0.103	0.09	0.049	0.354	0.267	0.096	0.133
Th	0.658	8.95	1.34	1.19	0.57	0.43	0.075	4.68	0.849	0.607
U	0.057	1.03	0.113	0.057	0.044	0.033	0.016	0.264	0.105	0.085

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-68F	MT-68F	MT-68F	MT-68F
Crystal[1]	5mc	10mic	11mc	11mc	11mc	11mc	10mic	3mc	3mc	7mc
Zone[2]	N	N	N	I2	I	B	N	B	N	NI
Type	B3	C	B3	C	A4	C	C	C	B5	C
Mg#[3]	52.35						72.94	67.96	54.73	79.52
Sc	19.9	94.9	23.3	25.7	31.3	82.8	53.5	57.6	8.71	72.1
V	297	199	215	285	232	206	248	645	308	255
Cr	41.6	2164	50.2	4.65	13	1815	220	131	b.d.	318
Mn	7132	802	3468	1491	1222	752	930	1859	2096	877
Co	22	26.7	23.1	20.2	19.6	24.4	29.2	101	22.3	29.2
Ni	20.4	132	28.6	16.1	24.9	93	105	156	3.31	83.3
Cu	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	1.79	3.28	1.12	2.29
Zn	247	23.9	145	55.6	44	23.5	38.3	126	91.4	35.2
Ga	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	14.7	38.1	25.8	15.1
Sr	386	244	596	533	474	273	263	2959	587	241
Y	22.5	29.1	18.2	46.2	34.6	28.5	24.6	53.6	37.8	30.5
Zr	1458	257	646	727	507	255	264	568	877	301
Nb	2.33	5.66	3.21	9.1	6.33	3.82	5.95	160	15.3	5.95
Ba	b.d.	1.16	b.d.	0.43	0.28	0.55	12.5	3008	b.d.	2.46
La	41.5	26	34.3	55.4	37.4	27.9	21.1	96.6	60.4	32.4
Ce	86.3	73.8	74.9	142	99.8	76.5	56.8	215	159	84.6
Pr	9.71	11.9	8.56	23	15	12.7	8.31	29.8	20.6	12.3
Nd	32.1	52.8	30.4	98.6	64.3	52.5	39.8	160	93.1	63.2
Sm	4.56	11.7	5.26	19.9	11.6	12.5	9.74	26.3	20.4	15.8
Eu	1.52	3.75	1.48	5.59	3.73	3.59	3.11	7.9	5.52	5.06
Gd	4.41	10.2	4.49	15.3	11	8.57	7.86	25.1	13.6	8.77
Tb	0.527	1.19	0.61	2.08	1.29	1.36	0.9	2.41	2.09	1.25
Dy	3.78	6.7	3	11.9	8.07	6.78	7.08	9.18	10.7	10.4
Ho	0.91	1.24	0.79	1.92	1.42	1	1.13	1.84	1.57	1.59
Er	2.38	1.77	1.96	5.38	3.05	2.45	2.85	3.67	4.62	4.06
Tm	0.458	0.251	0.302	0.535	0.324	0.202	b.d.	0.96	0.49	0.16
Yb	5.98	2.15	2.33	3.27	1.77	1.72	1.58	1.93	2.82	2.3
Lu	1.51	0.11	0.73	0.538	0.451	0.2	b.d.	0.74	0.38	0.41
Hf	28.5	8.52	10.2	18.6	13.1	6.22	9.11	24.9	20.9	13.2
Ta	0.103	0.74	0.249	2.14	1.26	0.69	0.55	7.91	3.57	1.26
Pb	0.454	b.d.	0.392	0.147	0.17	0.103	b.d.	b.d.	b.d.	0.48
Th	0.146	0.75	0.114	1.08	0.784	0.652	0.9	1.98	0.82	1.2
U	0.018	0.058	0.033	0.073	0.04	0.036	0.18	0.35	0.102	0.26

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75
Crystal[1]	12mc	1mc	1mc	4mc	6mc	8mc	14mc	14mc	15mc	20mc
Zone[2]	N	B	N	N	N	N	IB	N	I2	NN
Type	B5	C	B5	C	B5	B5	C	B5	C	B5
Mg#[3]	58.46	74.45	66.34	81.44	57.62	58.84	77.26	61.45	82.2	74.39
Sc	22.1	108	33.4	73.5	17.9	22.5	89.9	24.8	61.6	73.5
V	198	149	187	272	207	192	161	187	169	267
Cr	2.07	288	b.d.	4849	b.d.	2.01	70.8	3.14	3217	6747
Mn	2589	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Co	19.7	31.7	21.7	31.4	19.5	20.3	26.8	29.3	27.6	32.8
Ni	1.89	85.1	2.62	168	b.d.	1.88	54.8	4.64	149	190
Cu	0.41	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	1.34	1.55
Zn	132	36.4	85.2	25.3	161	133	33	138	28.9	36.4
Ga	21.1	11.2	18.1	13.7	22.3	20.2	10.9	17.9	7.76	15.7
Sr	561	240	387	189	658	553	306	496	182	205
Y	30.5	22.4	27.1	15.6	34.2	32.2	30.1	28.3	14.7	17.6
Zr	467	294	310	137	488	462	454	344	92.4	152
Nb	3.78	1.43	2.07	0.981	3.94	3.47	2.49	2.36	0.348	1.36
Ba	b.d.	2.48	b.d.	b.d.	b.d.	b.d.	1.94	b.d.	b.d.	b.d.
La	32.5	17.5	24.1	10.5	33.2	30.4	32.5	35.2	7.19	10.6
Ce	99.9	54.3	78.1	34.5	104	89.3	86.5	96.1	25.9	34.8
Pr	15.4	8.86	12.2	5.51	15.8	13.5	12.1	12.9	4.08	5.64
Nd	66.7	43	58.5	30.1	72	60.6	59.2	67.7	24.1	31.2
Sm	14.4	11.3	12.6	7.98	15.6	14.2	12.6	11.4	6.22	7.13
Eu	4.43	3.39	3.96	2.45	4.86	4.18	3.2	3.51	1.98	2.4
Gd	11.8	8.47	10	6.52	12	10.6	10.7	12	5.15	5.86
Tb	1.37	1.18	1.29	0.777	1.53	1.56	1.38	1.21	0.719	0.796
Dy	8.54	5.13	7.64	3.82	8.88	7.05	6.9	7.55	3.69	4.68
Ho	1.36	0.82	1.18	0.645	1.61	1.4	1.2	1.47	0.676	0.749
Er	3.58	1.88	2.83	1.38	3.58	3.23	3.01	3.49	1.57	2.01
Tm	0.453	0.25	0.446	b.d.	0.439	0.402	0.489	0.233	0.118	0.132
Yb	3.08	1.02	1.63	b.d.	2.76	2.85	2.17	3.98	0.97	1.01
Lu	0.391	0.3	0.306	b.d.	0.525	0.56	0.318	0.379	0.119	0.109
Hf	12.6	12.1	10.4	6.73	14.6	14.4	16.4	9.95	4.09	5.82
Ta	0.652	0.218	0.381	0.274	0.629	0.466	0.511	0.369	b.d.	0.244
Pb	0.325	b.d.	b.d.	b.d.	0.336	0.44	b.d.	0.39	b.d.	b.d.
Th	0.181	0.255	0.218	0.142	0.158	0.094	0.81	0.22	0.082	0.166
U	0.026	b.d.	b.d.	0.027	0.04	b.d.	0.039	0.152	0.016	0.013

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core;

IB = middle section closer to the rim

[3] Mg# = $(Mg/Fe_t+Mg)x100$ in a.p.f.u. Fe_t is all iron of structural formula.

b.d.: below detection

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-75	MT-75	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A
Crystal[1]	21mc	21mc	1mc	1mc	1mc	2mc	2mc	4mc	5mc	5mc
Zone[2]	N	NN	B	I	N	B	NN	N	I	I2
Type	B5	B5	C	A4	B5	C	B5?	A5	C	C
Mg#[3]	58.37	64.53	57.78	57.46	79.22	76.64	80.06	66.56	61.48	76.29
Sc	85.5	94.4	42.1	97.7	22.7	63.7	39.2	58.5	70.5	94.2
V	140	156	234	200	243	264	184	170	261	144
Cr	900	1382	5.02	2188	b.d.	1835	12.9	92.1	34.1	301
Mn	b.d.	b.d.	776	595	2843	1809	3197	4323	918	764
Co	28.8	32.2	30.9	28.3	14.5	30	28.5	21.7	38.6	28.4
Ni	97.1	103	53.2	130	1.5	87.4	12.8	12.3	63.8	151
Cu	1.18	b.d.	2.68	1.27	0.71	1.93	0.68	0.47	2.02	1.35
Zn	27.7	32.4	38.1	28.3	131	108	171	184	35.1	22.5
Ga	8.2	9.87	21.7	12.5	19.7	20.1	11.9	10.8	13	7.86
Sr	202	234	672	251	220	302	157	87.9	230	270
Y	17.1	19.1	34.7	17.2	56.5	36.5	45.4	87.5	17.7	17.4
Zr	177	192	547	175	427	321	352	154	161	196
Nb	0.94	0.95	6.65	1.34	4.85	3.45	1.12	0.744	0.899	0.92
Ba	b.d.	b.d.	5.24	0.44	b.d.	b.d.	b.d.	b.d.	b.d.	0.74
La	10.7	13.8	71.6	20.5	59.9	32.9	60	41.8	11.4	16.7
Ce	36.5	45.1	178	62.9	189	109	149	151	39.2	44.3
Pr	6.23	7.81	25.1	9.5	27.7	17.3	19.2	24.9	6.67	6.93
Nd	33.7	40.8	113	50.6	130	86.1	81	130	35.6	31.1
Sm	8.69	10.2	22.3	11.3	24.3	18.1	14.8	32.3	9.69	7.03
Eu	2.78	2.62	6.04	3.46	6.66	6.25	4.35	5.03	2.66	2.53
Gd	6.59	8.96	14.9	7.94	17.9	14.3	11.6	22.3	6.46	6.85
Tb	1.03	0.95	1.79	1.02	2.48	2.47	1.7	3.48	1.2	1.05
Dy	4.5	4.68	8.56	4.92	13.5	12.8	9.77	18.6	4.86	3.71
Ho	0.689	0.89	1.4	0.913	2.45	1.73	1.71	3.36	0.96	0.75
Er	1.69	2.09	2.65	1.44	5.83	4.66	5.26	8.65	1.52	1.43
Tm	0.209	0.189	0.382	0.14	0.74	0.56	0.77	1.13	0.249	0.052
Yb	0.99	1.19	2.09	1.37	5.45	4.04	6.11	7.5	1.45	1.2
Lu	0.132	0.155	0.256	0.109	0.829	0.336	1.03	1.06	0.116	0.174
Hf	7.12	8.02	15	7.72	13.9	11.9	14.3	5.16	8.14	7.3
Ta	0.168	0.128	1.46	0.223	0.835	0.78	0.061	0.043	0.245	0.15
Pb	0.173	b.d.	b.d.	0.157	0.395	0.48	0.54	0.53	b.d.	0.42
Th	0.077	0.196	2.46	0.375	0.401	0.41	0.129	0.325	0.17	0.181
U	0.01	b.d.	0.142	0.01	0.014	0.104	b.d.	0.035	0.012	0.04

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core;

IB = middle section closer to the rim

[3] Mg# = (Mg/Fe_t+Mg)x100 in a.p.f.u. Fe_t is all iron of structural formula.

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Table A6. Trace element concentrations (in ppm) of pyroxene from the investigated dikes.

Dike	MT-79A	MT-79A	MT-79A	MT-79A
Crystal[1]	5mc	7mc	7mc	11mc
Zone[2]	IB	I	N	N
Type	C	C	B5?	C
Mg#[3]	77.48	81.47	76.67	78.16
Sc	58.7	113	28.7	69.7
V	248	217	249	238
Cr	37.9	1896	8.19	330
Mn	1014	593	2508	854
Co	32.5	31.3	18.3	35.3
Ni	34.6	142	5.06	140
Cu	1.28	1.29	1.8	1.36
Zn	44.1	34.4	114	37.2
Ga	12.5	15	19.6	14.2
Sr	263	285	328	224
Y	21.5	18	51.5	19.7
Zr	172	268	429	163
Nb	1.19	2.53	4.93	0.95
Ba	b.d.	b.d.	15.2	b.d.
La	11.1	19.8	52.9	11.3
Ce	37.7	60.1	158	37
Pr	6.11	9.36	22.8	6.37
Nd	32.9	46.6	98.6	35.6
Sm	7.99	10.2	20.8	9.76
Eu	2.54	3.35	5.77	3.19
Gd	7.22	7.66	14.3	9.18
Tb	1	0.943	2.4	0.91
Dy	5.15	4.31	11.5	5.68
Ho	0.765	0.725	1.98	0.84
Er	2.01	1.52	4.96	1.69
Tm	0.194	0.247	0.73	0.199
Yb	1.33	0.95	5.38	1.27
Lu	0.1	0.151	0.7	0.163
Hf	5.15	11.7	12.6	10.5
Ta	0.203	0.641	0.98	0.267
Pb	0.083	0.133	0.28	b.d.
Th	0.134	0.283	0.297	0.191
U	b.d.	b.d.	0.042	0.108

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core; IB = middle section closer to the rim

[3] Mg# = (Mg/Fe_t+Mg)x100 in a.p.f.u. Fe_t is all iron of structural formula.

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Table A7. Major element concentrations on amphiboles from the studied dikes.Structural formula based on 13 cations excluding Ca, Na and K (13-eCNK)

Dike	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F
Crystal[1]	1mic	1mic	1mic	1mic	2mc	3mc	2mc	2mc	2mc	4mc
Location[2]	N	I	I2	IB	N	N	I	I2	B	N
Type	Euhedral	Euhedral	Euhedral	Euhedral	Euhedral	Euhedral	Euhedral	Euhedral	Euhedral	Euhedral
SiO_2	39.70	39.29	38.58	38.21	39.42	39.34	38.21	38.61	37.73	38.33
TiO_2	4.60	5.50	5.25	5.22	5.32	4.97	5.22	5.08	6.24	5.01
Al_2O_3	13.62	14.73	14.73	15.32	14.81	14.95	15.37	15.33	15.48	15.24
Cr_2O_3	0.00	0.02	0.00	0.00	0.01	0.01	0.02	0.04	0.02	0.02
FeO_t	11.69	9.45	12.34	10.85	9.91	9.69	11.23	9.97	10.56	11.26
MnO	0.18	0.11	0.13	0.15	0.11	0.12	0.14	0.11	0.16	0.16
MgO	12.80	13.91	12.09	13.04	13.79	13.75	12.71	13.45	12.91	12.82
CaO	11.58	11.86	11.53	12.13	12.02	12.10	12.01	12.00	12.04	11.58
Na_2O	2.52	2.25	2.53	2.31	2.20	2.20	2.19	2.06	2.20	2.35
K_2O	1.61	1.89	1.72	1.39	1.69	1.77	1.83	1.83	1.41	1.80
F	0.06	0.05	0.04	0.06	0.04	0.05	0.05	0.04	0.03	0.04
Cl	0.04	0.01	0.02	0.01	0.01	0.01	0.03	0.00	0.00	0.00
Total	**98.47**	**99.08**	**98.98**	**98.69**	**99.36**	**99.04**	**99.02**	**98.56**	**98.78**	**98.61**
-O=F,Cl	0.04	0.03	0.02	0.03	0.02	0.03	0.03	0.02	0.02	0.02
Ctotal	**98.43**	**99.05**	**98.96**	**98.66**	**99.34**	**99.01**	**98.99**	**98.54**	**98.76**	**98.59**
TSi	5.705	5.678	5.593	5.851	5.518	5.599	5.640	5.706	5.721	5.666
TAl	2.295	2.322	2.407	2.149	2.482	2.401	2.360	2.294	2.279	2.334
TFe3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TTi	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ T	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**
CAl	0.225	0.231	0.233	0.215	0.185	0.252	0.277	0.231	0.281	0.244
CCr	0.002	0.000	0.000	0.000	0.002	0.002	0.005	0.001	0.001	0.000
CFe3	0.192	0.247	0.305	0.235	0.261	0.260	0.282	0.245	0.190	0.240
CTi	0.601	0.581	0.575	0.510	0.687	0.575	0.558	0.579	0.544	0.579
CMg	3.011	2.653	2.845	2.812	2.815	2.777	2.929	2.976	2.981	2.891
CFe2	0.956	1.272	1.023	1.206	1.031	1.117	0.936	0.954	0.988	1.033
CMn	0.014	0.016	0.019	0.022	0.020	0.017	0.014	0.013	0.015	0.014
CCa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ C	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**
BMg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BFe2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BMn	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BCa	1.845	1.818	1.902	1.828	1.887	1.886	1.878	1.864	1.885	1.873
BNa	0.155	0.182	0.098	0.172	0.113	0.114	0.122	0.136	0.115	0.127
Σ B	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
ACa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANa	0.479	0.540	0.558	0.549	0.511	0.508	0.461	0.482	0.506	0.494
AK	0.350	0.323	0.260	0.303	0.263	0.342	0.341	0.312	0.328	0.325
Σ A	**0.829**	**0.863**	**0.817**	**0.851**	**0.774**	**0.850**	**0.803**	**0.794**	**0.834**	**0.819**
Σ cations	**15.829**	**15.863**	**15.817**	**15.851**	**15.774**	**15.850**	**15.803**	**15.794**	**15.834**	**15.819**
CCl	0.002	0.005	0.002	0.010	0.000	0.007	0.000	0.002	0.002	0.005
CF	0.023	0.019	0.028	0.028	0.014	0.023	0.018	0.018	0.023	0.018
Σ oxy	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**
Mg#[3]	72.15	63.35	67.87	65.78	68.21	66.58	70.39	71.06	71.42	69.20

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Mg#=Mg#=100x(Mg/Fe_t+Mn+Mg) in a.p.f.u. Fe_t is all iron of structural formula.

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Table A7. Major element concentrations on amphiboles from the studied dikes.Structural formula based on 13 cations excluding Ca, Na and K (13-eCNK)

Dike	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-73C	MT-73C	MT-73C
Crystal[1]	4mc	5mc	4mc	6mc	7mc	7mc	7mc	1mc	1mc	1mc
Location[2]	I	N	B	N	NI	I	B	N	I2	B
Type	Euhedral	Euhedral	Euhedral	Euhedral	Euhedral	Euhedral	Euhedral	Anhedral	Anhedral	Anhedral
SiO_2	38.73	37.95	38.95	39.52	37.89	38.77	39.10	38.16	38.94	38.17
TiO_2	5.25	5.53	5.29	5.20	5.81	5.03	4.76	4.96	5.19	6.33
Al_2O_3	15.27	15.51	15.05	14.52	15.29	14.64	15.25	15.15	15.17	15.10
Cr_2O_3	0.00	0.03	0.00	0.01	0.02	0.00	0.02	0.01	0.01	0.00
FeO_t	10.13	10.68	10.46	9.95	10.83	10.99	10.20	12.05	10.35	10.20
MnO	0.10	0.11	0.11	0.11	0.13	0.11	0.08	0.14	0.12	0.12
MgO	13.39	12.97	13.33	13.77	12.96	13.25	13.31	12.19	13.41	13.25
CaO	12.10	11.71	12.02	11.98	12.00	11.86	12.12	11.79	12.10	12.28
Na_2O	2.15	2.23	2.20	2.23	2.05	2.26	2.20	2.29	2.21	2.21
K_2O	1.76	1.81	1.75	1.67	1.48	1.80	1.73	1.75	1.74	1.48
F	0.05	0.07	0.04	0.04	0.05	0.04	0.06	0.04	0.06	0.03
Cl	0.01	0.03	0.02	0.02	0.01	0.05	0.04	0.00	0.01	0.04
Total	**98.95**	**98.65**	**99.24**	**99.04**	**98.54**	**98.82**	**98.88**	**98.54**	**99.35**	**99.31**
-O=F,Cl	0.03	0.04	0.02	0.02	0.03	0.03	0.04	0.02	0.03	0.02
Ctotal	**98.92**	**98.61**	**99.22**	**99.02**	**98.51**	**98.79**	**98.84**	**98.52**	**99.32**	**99.29**
TSi	5.646	5.616	5.558	5.742	5.705	5.674	5.549	5.569	5.563	5.658
TAl	2.354	2.384	2.442	2.258	2.295	2.326	2.451	2.431	2.437	2.342
TFe3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TTi	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ T	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**
CAl	0.267	0.246	0.234	0.226	0.326	0.197	0.186	0.164	0.222	0.254
CCr	0.000	0.002	0.003	0.001	0.002	0.000	0.002	0.000	0.003	0.001
CFe3	0.221	0.392	0.339	0.228	0.188	0.325	0.359	0.138	0.273	0.239
CTi	0.576	0.552	0.609	0.568	0.522	0.554	0.640	0.695	0.655	0.567
CMg	2.910	2.800	2.832	2.982	2.895	2.891	2.829	2.882	2.821	2.905
CFe2	1.014	0.988	0.969	0.981	1.056	1.020	0.968	1.107	1.012	1.019
CMn	0.012	0.020	0.014	0.014	0.010	0.014	0.016	0.015	0.013	0.015
CCa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ C	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**
BMg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BFe2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BMn	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BCa	1.890	1.818	1.838	1.865	1.895	1.860	1.883	1.920	1.834	1.884
BNa	0.110	0.182	0.162	0.135	0.105	0.140	0.117	0.080	0.166	0.116
Σ B	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
ACa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANa	0.497	0.486	0.471	0.493	0.517	0.501	0.465	0.545	0.437	0.506
AK	0.327	0.336	0.338	0.310	0.322	0.336	0.277	0.275	0.358	0.323
Σ A	**0.825**	**0.822**	**0.809**	**0.803**	**0.839**	**0.837**	**0.741**	**0.820**	**0.795**	**0.829**
Σ cations	**15.825**	**15.822**	**15.809**	**15.803**	**15.839**	**15.837**	**15.741**	**15.820**	**15.795**	**15.829**
CCl	0.002	0.000	0.007	0.005	0.010	0.012	0.002	0.010	0.010	0.002
CF	0.023	0.019	0.032	0.018	0.028	0.019	0.023	0.014	0.027	0.028
Σ oxy	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**
Mg#[3]	70.00	66.67	68.18	70.92	69.78	68.02	67.81	69.58	68.49	69.53

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Mg#=Mg#=100x(Mg/Fe_t+Mn+Mg) in a.p.f.u. Fe_t is all iron of structural formula.

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Table A7. Major element concentrations on amphiboles from the studied dikes.Structural formula based on 13 cations excluding Ca, Na and K (13-eCNK)

Dike	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C	MT-73C
Crystal[1]	1mc	2mc	2mc	2mc	3mc	3mc	3mc	4mc	5mic	5mic
Location[2]	I	N	I	B	N	I	B	N	N	N2
Type	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral
SiO_2	38.45	38.41	38.99	38.52	38.84	38.45	37.53	40.04	37.98	38.21
TiO_2	6.02	5.12	5.27	5.48	5.49	5.16	5.61	4.09	5.66	5.86
Al_2O_3	15.61	14.73	14.75	15.41	14.92	15.39	15.86	13.30	15.25	15.00
Cr_2O_3	0.03	0.01	0.00	0.04	0.00	0.06	0.01	0.01	0.04	0.02
FeO_t	10.62	12.72	11.93	10.67	11.29	12.42	10.79	11.26	11.33	10.19
MnO	0.11	0.22	0.18	0.14	0.17	0.21	0.20	0.20	0.21	0.16
MgO	13.08	11.76	12.12	12.91	12.56	11.99	12.84	13.37	12.08	13.13
CaO	11.83	11.64	11.68	11.87	11.80	11.54	11.97	11.47	11.77	12.07
Na_2O	2.15	2.34	2.27	2.22	2.34	2.32	2.38	2.70	2.31	2.34
K_2O	1.94	1.90	1.83	1.98	1.84	1.80	1.58	1.55	1.94	1.50
F	0.06	0.04	0.04	0.05	0.04	0.04	0.02	0.07	0.06	0.06
Cl	0.04	0.04	0.01	0.04	0.00	0.02	0.02	0.02	0.04	0.01
Total	**100**	**98.91**	**99.08**	**99.38**	**99.32**	**99.45**	**98.84**	**98.16**	**98.69**	**98.55**
-O=F,Cl	0.04	0.03	0.02	0.03	0.02	0.02	0.01	0.04	0.04	0.03
Ctotal	**99.96**	**98.88**	**99.06**	**99.35**	**99.30**	**99.43**	**98.83**	**98.12**	**98.65**	**98.52**
TSi	5.630	5.620	5.726	5.676	5.496	5.620	5.683	5.895	5.747	5.669
TAl	2.370	2.380	2.274	2.324	2.504	2.380	2.317	2.105	2.253	2.331
TFe3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TTi	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ T	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**
CAl	0.263	0.267	0.277	0.240	0.231	0.269	0.254	0.200	0.253	0.211
CCr	0.001	0.005	0.000	0.001	0.001	0.007	0.000	0.001	0.001	0.000
CFe3	0.293	0.199	0.168	0.230	0.308	0.362	0.148	0.318	0.226	0.228
CTi	0.550	0.601	0.582	0.569	0.618	0.567	0.604	0.453	0.524	0.591
CMg	2.681	2.808	2.653	2.591	2.803	2.613	2.740	2.934	2.691	2.644
CFe2	1.194	1.103	1.297	1.342	1.013	1.156	1.233	1.068	1.279	1.301
CMn	0.017	0.017	0.022	0.028	0.025	0.026	0.021	0.025	0.026	0.025
CCa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ C	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**
BMg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BFe2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BMn	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BCa	1.864	1.855	1.838	1.843	1.878	1.807	1.850	1.809	1.841	1.838
BNa	0.136	0.145	0.162	0.157	0.122	0.193	0.150	0.191	0.159	0.162
Σ B	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
ACa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANa	0.519	0.483	0.484	0.514	0.554	0.465	0.514	0.580	0.530	0.512
AK	0.329	0.369	0.343	0.358	0.295	0.336	0.343	0.291	0.354	0.358
Σ A	**0.848**	**0.852**	**0.827**	**0.872**	**0.849**	**0.800**	**0.857**	**0.871**	**0.884**	**0.870**
Σ cations	**15.848**	**15.852**	**15.827**	**15.872**	**15.849**	**15.800**	**15.857**	**15.871**	**15.884**	**15.870**
CCl	0.000	0.010	0.002	0.010	0.005	0.005	0.001	0.005	0.000	0.010
CF	0.019	0.023	0.019	0.019	0.009	0.018	0.019	0.033	0.023	0.023
Σ oxy	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**
Mg#[3]	64.06	68.04	64.08	61.82	67.56	62.86	66.15	67.53	63.74	62.98

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Mg#=Mg#=100x(Mg/Fe_t+Mn+Mg) in a.p.f.u. Fe_t is all iron of structural formula.

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Table A7. Major element concentrations on amphiboles from the studied dikes.Structural formula based on 13 cations excluding Ca, Na and K (13-eCNK)

Dike	MT-73C	MT-73C	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B
Crystal[1]	5mic	5mic	1mc	1mc	2mc	2mc	2mc	3mc	3mc	3mc
Location[2]	I	B	N	N2	N	NI	B	N	NI	IB
Type	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral
SiO_2	38.36	38.94	37.48	38.12	38.53	38.61	36.98	37.09	37.67	37.88
TiO_2	5.32	4.72	4.90	5.48	4.86	4.45	5.42	4.99	4.14	3.80
Al_2O_3	14.60	14.42	15.56	15.20	15.43	15.86	15.74	15.85	16.53	17.03
Cr_2O_3	0.00	0.01	0.01	0.02	0.00	0.01	0.00	0.00	0.06	0.00
FeO_t	12.37	12.19	13.31	10.27	10.53	11.83	10.65	11.21	10.66	11.30
MnO	0.20	0.21	0.21	0.13	0.18	0.24	0.16	0.20	0.21	0.21
MgO	12.00	12.23	11.26	13.17	12.93	11.99	12.70	12.27	13.31	12.60
CaO	11.61	11.64	11.52	11.93	11.87	11.88	11.83	11.71	11.79	11.94
Na_2O	2.35	2.41	2.20	2.32	2.35	2.46	2.33	2.38	2.61	2.49
K_2O	1.90	1.88	1.91	1.43	1.57	1.47	1.41	1.51	1.34	1.43
F	0.05	0.05	0.04	0.04	0.08	0.06	0.09	0.02	0.06	0.13
Cl	0.04	0.00	0.02	0.03	0.05	0.05	0.05	0.05	0.02	0.00
Total	**98.82**	**98.71**	**98.43**	**98.13**	**98.38**	**98.95**	**97.36**	**97.28**	**98.41**	**98.83**
-O=F,Cl	0.03	0.03	0.02	0.03	0.05	0.04	0.06	0.02	0.03	0.07
Ctotal	**98.79**	**98.69**	**98.41**	**98.10**	**98.33**	**98.91**	**97.30**	**97.26**	**98.38**	**98.77**
TSi	5.618	5.611	5.563	5.600	5.490	5.654	5.664	5.336	5.520	5.520
TAl	2.382	2.389	2.437	2.400	2.510	2.346	2.336	2.664	2.480	2.480
TFe3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TTi	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ T	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**
CAl	0.274	0.205	0.282	0.230	0.242	0.320	0.404	0.481	0.443	0.298
CCr	0.005	0.002	0.001	0.002	0.000	0.000	0.001	0.002	0.000	0.000
CFe3	0.085	0.142	0.402	0.272	0.357	0.258	0.239	0.342	0.506	0.356
CTi	0.630	0.647	0.547	0.606	0.605	0.536	0.491	0.597	0.417	0.559
CMg	2.664	2.874	2.491	2.884	2.811	2.829	2.622	1.636	2.737	2.722
CFe2	1.317	1.109	1.250	0.990	0.965	1.034	1.213	1.890	0.872	1.039
CMn	0.026	0.020	0.026	0.016	0.020	0.022	0.030	0.052	0.026	0.025
CCa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ C	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**
BMg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BFe2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BMn	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BCa	1.865	1.899	1.832	1.878	1.882	1.866	1.867	1.841	1.864	1.867
BNa	0.135	0.101	0.168	0.122	0.118	0.134	0.133	0.159	0.136	0.133
Σ B	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
ACa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANa	0.528	0.565	0.465	0.539	0.552	0.535	0.567	0.518	0.568	0.554
AK	0.366	0.281	0.362	0.268	0.267	0.294	0.275	0.286	0.266	0.287
Σ A	**0.894**	**0.846**	**0.827**	**0.807**	**0.819**	**0.829**	**0.842**	**0.804**	**0.834**	**0.841**
Σ cations	**15.894**	**15.846**	**15.827**	**15.807**	**15.819**	**15.829**	**15.842**	**15.804**	**15.834**	**15.841**
CCl	0.010	0.002	0.005	0.007	0.013	0.012	0.012	0.016	0.000	0.013
CF	0.028	0.028	0.019	0.019	0.042	0.037	0.028	0.014	0.060	0.009
Σ oxy	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**
Mg#[3]	65.10	69.34	59.75	69.29	67.69	68.28	63.89	41.73	66.10	65.72

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Mg#=Mg#=100x(Mg/Fe_t+Mn+Mg) in a.p.f.u. Fe_t is all iron of structural formula.

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Table A7. Major element concentrations on amphiboles from the studied dikes.Structural formula based on 13 cations excluding Ca, Na and K (13-eCNK)

Dike	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B	MT-74B
Crystal[1]	3mc	4mic	4mic	4mic	4mic	4mic	5mc	5mc	5mc	5mc
Location[2]	B	N	NI	I	I2	IB	N	I	B	IB
Type	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral	Anhedral
SiO_2	35.00	37.61	36.72	36.79	34.46	37.31	38.65	37.77	36.97	37.04
TiO_2	5.21	3.45	5.30	4.14	5.15	4.92	4.37	4.44	4.41	4.91
Al_2O_3	17.52	16.58	16.82	16.99	17.63	17.06	15.62	16.08	16.61	16.81
Cr_2O_3	0.02	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02
FeO_t	17.50	11.27	10.62	13.83	19.94	10.50	10.68	12.96	16.20	11.82
MnO	0.40	0.22	0.20	0.27	0.48	0.19	0.23	0.23	0.34	0.24
MgO	7.20	12.79	12.76	10.57	5.76	12.97	13.26	11.24	8.76	11.76
CaO	11.27	11.97	11.62	12.00	11.32	11.73	11.88	11.96	11.67	11.69
Na_2O	2.29	2.48	2.35	2.40	2.39	2.45	2.49	2.48	2.48	2.44
K_2O	1.47	1.45	1.61	1.43	1.64	1.40	1.31	1.40	1.42	1.43
F	0.03	0.04	0.07	0.06	0.01	0.06	0.06	0.02	0.04	0.03
Cl	0.06	0.04	0.04	0.04	0.05	0.02	0.03	0.06	0.03	0.05
Total	**98.04**	**97.95**	**98.14**	**98.57**	**98.86**	**98.61**	**98.6**	**98.64**	**98.95**	**98.29**
-O=F,Cl	0.03	0.03	0.04	0.04	0.02	0.03	0.04	0.02	0.03	0.03
Ctotal	**98.01**	**97.92**	**98.10**	**98.53**	**98.84**	**98.58**	**98.56**	**98.62**	**98.92**	**98.26**
TSi	5.488	5.467	5.285	5.427	5.529	5.389	5.541	5.590	5.462	5.631
TAl	2.512	2.533	2.715	2.573	2.471	2.611	2.459	2.410	2.538	2.369
TFe3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TTi	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ T	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**	**8.000**
CAl	0.324	0.441	0.469	0.349	0.400	0.295	0.472	0.393	0.381	0.311
CCr	0.007	0.002	0.000	0.000	0.002	0.000	0.000	0.000	0.002	0.000
CFe3	0.607	0.381	0.306	0.541	0.555	0.522	0.253	0.259	0.406	0.444
CTi	0.454	0.463	0.594	0.538	0.382	0.585	0.497	0.494	0.545	0.479
CMg	2.891	2.342	1.317	2.812	2.803	2.791	1.957	2.480	2.585	2.880
CFe2	0.692	1.338	2.251	0.736	0.830	0.781	1.777	1.345	1.051	0.858
CMn	0.026	0.034	0.062	0.023	0.027	0.025	0.043	0.029	0.030	0.028
CCa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ C	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**	**5.000**
BMg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BFe2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BMn	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BCa	1.840	1.911	1.860	1.828	1.885	1.827	1.874	1.897	1.847	1.855
BNa	0.160	0.089	0.140	0.172	0.115	0.173	0.126	0.103	0.153	0.145
Σ B	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**
ACa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANa	0.578	0.602	0.571	0.519	0.592	0.496	0.595	0.608	0.544	0.558
AK	0.249	0.271	0.321	0.260	0.272	0.301	0.271	0.264	0.269	0.243
Σ A	**0.827**	**0.873**	**0.892**	**0.779**	**0.864**	**0.797**	**0.866**	**0.873**	**0.813**	**0.801**
Σ cations	**15.827**	**15.873**	**15.892**	**15.779**	**15.864**	**15.797**	**15.866**	**15.873**	**15.813**	**15.801**
CCl	0.005	0.010	0.013	0.005	0.010	0.010	0.008	0.015	0.013	0.007
CF	0.028	0.028	0.005	0.028	0.019	0.032	0.019	0.009	0.014	0.028
Σ oxy	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**	**23.000**
Mg#[3]	68.57	57.19	33.46	68.39	66.50	67.76	48.56	60.30	63.48	68.41

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Mg#=Mg#=100x(Mg/Fe_t+Mn+Mg) in a.p.f.u. Fe_t is all iron of structural formula.

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Table A7. Major element concentrations on amphiboles from the studied dikes.Structural formula based on 13 cations excluding Ca, Na and K (13-eCNK)

Dike	MT-74B	MT-74B
Crystal[1]	6mc	6mc
Location[2]	N	B
Type	Anhedral	Anhedral
SiO_2	37.23	39.23
TiO_2	5.32	3.95
Al_2O_3	17.13	15.54
Cr_2O_3	0.04	0.03
FeO_t	10.10	10.01
MnO	0.20	0.21
MgO	13.00	13.44
CaO	11.74	11.85
Na_2O	2.42	2.54
K_2O	1.45	1.37
F	0.05	0.07
Cl	0.02	0.03
Total	**98.72**	**98.3**
-O=F,Cl	0.03	0.04
Ctotal	**98.69**	**98.26**
TSi	5.723	5.412
TAl	2.277	2.588
TFe3	0.000	0.000
TTi	0.000	0.000
Σ T	**8.000**	**8.000**
CAl	0.393	0.344
CCr	0.003	0.005
CFe3	0.336	0.468
CTi	0.433	0.582
CMg	2.923	2.817
CFe2	0.886	0.760
CMn	0.026	0.025
CCa	0.000	0.000
Σ C	**5.000**	**5.000**
BMg	0.000	0.000
BFe2	0.000	0.000
BMn	0.000	0.000
BCa	1.852	1.828
BNa	0.148	0.172
Σ B	**2.000**	**2.000**
ACa	0.000	0.000
ANa	0.571	0.511
AK	0.255	0.269
Σ A	**0.826**	**0.779**
Σ cations	**15.826**	**15.779**
CCl	0.007	0.005
CF	0.032	0.023
Σ oxy	**23.000**	**23.000**
Mg#[3]	70.08	69.21

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Mg#=Mg#=100x(Mg/Fe_t+Mn+Mg) in a.p.f.u. Fe_t is all iron of structural formula.

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Table A8. Trace element concentrations (in ppm) of amphibole from the investigated dikes.

Dike	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-68F	MT-73C	MT-73C	MT-73C
Crystal[1]	2mc	2mc	4mc	4mc	4mc	6mc	7mc	1mc	1mc	2mc
Crystal zone[2]	N	B	N	I	B	N	B	N	B	N
Type	*Euhedral*	*Euhedral*	*Euhedral*	*Euhedral*	*Euhedral*	*Euhedral*	*Euhedral*	*Anhedral*	*Anhedral*	*Anhedral*
Sc	39.9	41.2	35.4	29.9	37.2	38.8	33.4	16.5	11	30.4
V	346	332	333	343	364	334	334	368	341	311
Cr	27.8	98.7	57.6	7.84	18.4	21.3	29	40.4	b.d.	22
Mn	805	736	805	869	895	756	958	1655	1241	835
Co	60.1	56.2	54.8	58.9	64.1	58.5	58.3	43.8	48.1	48.3
Ni	213	188	148	105	145	180	106	48.2	52.8	55.9
Zn	63.7	63	67.8	71.1	69.7	67.1	87.7	112	86.7	53.6
Rb	13.6	11.6	13.1	13.4	12.6	10.2	12.4	12.3	8.56	11.6
Sr	1865	1684	1784	1759	1689	1375	1737	2232	2944	1630
Y	28	24.6	27.8	29.3	26.1	22.4	29.5	36.9	45	25.9
Zr	241	191	235	259	214	184	261	347	477	271
Nb	74.6	66.4	77.7	74.4	71.5	63.1	88.2	178	294	95.7
Ba	1873	1647	1851	1795	1728	1437	1751	1866	2199	2361
La	37.8	34.9	43.7	52.9	37.8	28.8	46.1	64.5	90	84.2
Ce	106	90.6	110	125	98.8	72.9	117	186	237	237
Pr	14.6	13.2	15.5	16.6	14	11.1	16.3	22.6	26.4	26.1
Nd	74.7	67.1	67.9	78.7	65.9	50.9	77.6	98.3	96.3	104
Sm	13.9	15	13.2	14.9	12	11.2	15.3	16.7	15.3	18.1
Eu	4.39	5	4.73	4.82	4.3	3.43	5.02	5.25	4.86	5.42
Gd	11.1	9.54	10.2	10.8	10.7	7.23	11.2	13.3	14.1	14.1
Tb	1.57	1.57	1.38	1.63	1.32	1.06	1.45	1.66	1.62	1.99
Dy	8.2	5.56	7.53	7.47	7.61	8.33	6.11	7.32	12.1	8.72
Ho	1.33	1.05	1.28	1.46	1.27	1.34	1.12	1.38	1.34	1.28
Er	2.52	2.2	3.07	2.64	2.5	1.76	3.02	3.34	3.98	4.14
Tm	0.332	0.206	0.329	0.349	0.308	0.331	0.399	0.332	0.62	0.429
Yb	2.06	1.63	1.92	1.78	2.01	0.97	2.13	2.9	2.16	2.97
Lu	0.261	0.372	0.243	0.292	0.227	0.175	0.306	0.267	0.284	0.249
Hf	8.21	5.29	7.59	7.43	7.69	6.43	8.62	8.03	9.1	9.9
Ta	4.58	3.93	4.68	4.77	4.58	3.21	4.91	9.2	12.4	9.99
Pb	0.78	0.47	0.72	0.93	0.79	0.69	0.93	0.617	0.67	0.398
Th	0.47	0.55	0.555	1.2	0.494	0.51	0.571	1.03	3.83	1.97
U	0.067	0.027	0.094	0.19	0.043	0.044	0.076	0.122	0.365	0.242

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core; IB = middle section closer to the rim.

b.d.: below detection

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Table A8. Trace element concentrations (in ppm) of amphibole from the investigated dikes.

Dike	MT-74B	MT-74B
Crystal[1]	2mc	4mic
Crystal zone[2]	N	N
Type	*Anhedral*	*Anhedral*
Sc	2.3	3.41
V	220	230
Cr	b.d.	b.d.
Mn	1451	1517
Co	35.5	36.5
Ni	35.3	23.6
Zn	66.6	79.9
Rb	6.45	7.73
Sr	2653	3031
Y	39.1	51.8
Zr	403	564
Nb	334	344
Ba	2553	2441
La	110	132
Ce	275	281
Pr	32.3	32.6
Nd	98.8	115
Sm	16	20.6
Eu	5.55	5.54
Gd	12	13.3
Tb	1.6	1.89
Dy	9.98	10.7
Ho	1.76	2.07
Er	3.93	4.54
Tm	0.466	0.7
Yb	3.74	4.57
Lu	0.488	0.486
Hf	5.39	9.44
Ta	15	17.5
Pb	0.162	0.497
Th	5.42	4.88
U	0.38	0.405

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core; IB = middle section closer to the rim.

b.d.: below detection

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Table A9. Major element concentrations on micas from the studied dikes. Structural formulae calculated on the basis of 11 oxygens

Dike	MT-75	MT-75	MT-75	MT-75	MT-75	MT-75	MT-79A	MT-79A	MT-79A	MT-79A
Crystal[1]	1mc	1mc	1mc	1mc	1mc	1mc	1mic	1mic	2mc	3mc
Location[2]	N	N2	I	IB	B	B2	N	N2	N	N
SiO_2	36.00	36.29	35.88	36.29	35.30	34.75	34.42	34.62	35.62	35.48
TiO_2	6.93	6.42	6.88	6.64	7.45	7.77	8.44	8.02	7.65	6.96
Al_2O_3	16.44	15.92	16.43	15.99	15.59	16.11	17.19	16.98	17.05	16.94
FeO	9.46	9.40	9.78	9.62	10.07	9.82	9.20	9.36	10.01	10.49
MnO	0.08	0.05	0.05	0.04	0.13	0.12	0.09	0.10	0.04	0.07
MgO	16.98	17.34	16.85	17.39	17.07	16.69	16.00	16.01	16.60	16.43
CaO	0.01	0.07	0.00	0.05	0.05	0.06	0.10	0.15	0.08	0.05
Na_2O	0.64	0.60	0.66	0.67	0.68	0.67	0.47	0.46	0.58	0.56
K_2O	9.51	9.56	9.49	9.68	8.83	8.92	8.84	8.73	9.41	9.00
BaO	0.75	0.74	0.64	0.76	2.08	2.27	0.00	0.00	0.00	0.00
F	0.00	0.00	0.01	0.00	0.00	0.00	0.11	0.10	0.11	0.10
Cl	0.04	0.02	0.03	0.02	0.02	0.02	0.03	0.00	0.00	0.02
Total	**96.86**	**96.41**	**96.75**	**97.20**	**97.29**	**97.23**	**94.91**	**94.53**	**97.15**	**96.13**
^{IV}Si	2.608	2.640	2.605	2.625	2.579	2.545	2.522	2.546	2.560	2.578
^{IV}Al	1.392	1.365	1.395	1.363	1.343	1.391	1.478	1.454	1.444	1.422
$^{IV}Fe^{3+}$	0.000	0.000	0.000	0.011	0.078	0.064	0.000	0.000	0.000	0.000
Σ T	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**
^{VI}Al	0.012	0.000	0.010	0.000	0.000	0.000	0.006	0.018	0.000	0.029
^{VI}Ti	0.378	0.351	0.376	0.361	0.409	0.428	0.465	0.444	0.414	0.380
$^{VI}Fe^{2+}$	0.573	0.572	0.594	0.570	0.537	0.537	0.564	0.576	0.602	0.637
^{VI}Mn	0.005	0.003	0.003	0.003	0.008	0.007	0.006	0.006	0.003	0.005
^{VI}Mg	1.834	1.881	1.824	1.876	1.860	1.822	1.748	1.755	1.779	1.780
Σ O	**2.789**	**2.807**	**2.796**	**2.810**	**2.814**	**2.795**	**2.782**	**2.781**	**2.797**	**2.802**
Ca	0.001	0.006	0.000	0.004	0.004	0.004	0.008	0.011	0.006	0.004
Na	0.090	0.085	0.093	0.095	0.097	0.095	0.067	0.065	0.081	0.079
K	0.879	0.887	0.879	0.893	0.823	0.833	0.826	0.819	0.863	0.834
Ba	0.021	0.021	0.018	0.022	0.060	0.065	0.000	0.000	0.000	0.000
Σ Intl.	**0.991**	**0.999**	**0.990**	**1.013**	**0.983**	**0.998**	**0.901**	**0.896**	**0.950**	**0.918**
F	0.000	0.000	0.003	0.000	0.000	0.000	0.025	0.022	0.024	0.022
Cl	0.005	0.002	0.004	0.003	0.002	0.003	0.004	0.000	0.000	0.003
OH	1.995	1.998	1.993	1.997	1.998	1.997	1.972	1.978	1.976	1.975
Mg#[3]	76.19	76.68	75.44	76.68	77.58	77.24	75.61	75.31	74.73	73.63
Group	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral
Modifier	titanian	titanian	titanian	titanian	titanian	titanian	titanian	titanian	titanian	titanian
Name	octa-ferrian phlogopite	octa-ferrian phlogopite	octa-ferrian phlogopite	octa-ferrian phlogopite	octa-ferrian phlogopite	octa-ferrian phlogopite	octa-ferrian phlogopite	octa-ferrian phlogopite	octa-ferrian phlogopite	octa-ferrian phlogopite

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Mg# = $(Mg/Fe^{2+}+Mg)x100$ in a.p.f.u.

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Table A9. Major element concentrations on micas from the studied dikes. Structural formulae calculated on the basis of 11 oxygens

Dike	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A
Crystal[1]	3mc	4mc	4mc	4mc	4mc	5mc	5mc	6mc	8mc	6mc
Location[2]	I	N	N2	I	B	N	I	N	N	B
SiO_2	34.78	34.78	34.96	33.24	35.04	35.59	35.53	35.39	35.92	33.79
TiO_2	7.89	7.39	7.50	7.81	7.54	6.91	6.63	6.78	6.54	7.69
Al_2O_3	16.48	17.19	16.37	16.43	16.83	17.26	17.04	17.19	16.93	15.95
FeO	9.36	8.91	9.14	9.55	9.11	9.18	9.19	9.01	8.10	9.23
MnO	0.06	0.05	0.05	0.09	0.09	0.07	0.06	0.06	0.05	0.10
MgO	17.04	16.85	17.05	16.95	16.61	16.90	17.24	17.26	17.86	17.36
CaO	0.08	0.24	0.07	0.04	0.10	0.05	0.02	0.05	0.02	0.07
Na_2O	0.44	0.45	0.48	0.50	0.44	0.51	0.53	0.49	0.45	0.49
K_2O	8.99	8.99	9.09	8.96	9.07	9.25	9.14	9.06	9.58	9.18
BaO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	0.10	0.05	0.09	0.14	0.11	0.09	0.08	0.08	0.10	0.10
Cl	0.01	0.01	0.00	0.05	0.00	0.00	0.00	0.01	0.01	0.05
Total	**95.24**	**94.91**	**94.83**	**93.78**	**94.95**	**95.80**	**95.45**	**95.38**	**95.58**	**94.04**
^{IV}Si	2.543	2.546	2.566	2.481	2.565	2.580	2.585	2.573	2.600	2.514
^{IV}Al	1.420	1.454	1.416	1.445	1.435	1.420	1.415	1.427	1.400	1.399
$^{IV}Fe^{3+}$	0.037	0.000	0.018	0.074	0.000	0.000	0.000	0.000	0.000	0.087
Σ T	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**
^{VI}Al	0.000	0.029	0.000	0.000	0.016	0.055	0.046	0.047	0.044	0.000
^{VI}Ti	0.434	0.407	0.414	0.438	0.415	0.377	0.363	0.371	0.356	0.430
$^{VI}Fe^{2+}$	0.535	0.545	0.543	0.523	0.558	0.556	0.559	0.548	0.490	0.487
^{VI}Mn	0.004	0.003	0.003	0.006	0.006	0.004	0.004	0.004	0.003	0.006
^{VI}Mg	1.857	1.839	1.866	1.886	1.812	1.826	1.870	1.871	1.927	1.926
Σ O	**2.831**	**2.794**	**2.825**	**2.853**	**2.791**	**2.764**	**2.795**	**2.793**	**2.777**	**2.849**
Ca	0.006	0.019	0.005	0.003	0.008	0.004	0.001	0.004	0.002	0.006
Na	0.062	0.064	0.069	0.073	0.063	0.072	0.074	0.069	0.063	0.071
K	0.838	0.839	0.851	0.853	0.847	0.855	0.848	0.840	0.885	0.871
Ba	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Σ Intl.	**0.907**	**0.922**	**0.925**	**0.929**	**0.918**	**0.931**	**0.923**	**0.913**	**0.950**	**0.948**
F	0.024	0.013	0.022	0.033	0.025	0.020	0.019	0.019	0.024	0.024
Cl	0.002	0.001	0.000	0.006	0.000	0.000	0.000	0.002	0.001	0.006
OH	1.975	1.986	1.978	1.961	1.975	1.979	1.981	1.979	1.975	1.970
Mg#[3]	77.62	77.13	77.47	78.31	76.47	76.65	76.98	77.35	79.72	79.81
Group	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral
Modifier	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian
Name	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Mg# = $(Mg/Fe^{2+}+Mg)x100$ in a.p.f.u.

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Table A9. Major element concentrations on micas from the studied dikes. Structural formulae calculated on the basis of 11 oxygens

Dike	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A
Crystal[1]	7mc	8mc	9mc	9mc	9mc	9mc	10mc	10mc	10mc	10mc
Location[2]	B	B	N	I	IB	B	B	IB	I	N
SiO_2	35.64	35.27	35.06	35.73	35.51	35.15	33.95	35.40	35.64	35.62
TiO_2	7.19	7.97	7.25	7.04	8.14	7.26	7.13	8.04	7.12	6.57
Al_2O_3	16.68	16.65	16.15	15.85	15.50	15.19	14.61	15.48	15.89	15.55
FeO	9.40	8.83	10.69	8.97	8.80	9.34	11.85	9.06	9.55	9.40
MnO	0.11	0.07	0.04	0.05	0.09	0.09	0.21	0.09	0.04	0.03
MgO	16.25	16.74	16.13	17.45	17.20	17.13	15.10	17.16	17.02	17.70
CaO	0.05	0.05	0.10	0.06	0.07	0.23	0.67	0.04	0.08	0.10
Na_2O	0.44	0.41	0.60	0.51	0.48	0.41	0.43	0.47	0.59	0.63
K_2O	9.13	8.92	9.20	9.22	9.16	9.10	8.77	9.16	9.15	9.11
BaO	0.00	0.00	0.75	0.66	1.55	1.11	1.53	1.33	0.51	0.49
F	0.09	0.13	0.10	0.08	0.11	0.12	0.12	0.11	0.09	0.07
Cl	0.00	0.00	0.02	0.05	0.05	0.00	0.00	0.00	0.03	0.00
Total	**94.98**	**95.06**	**96.11**	**95.68**	**96.66**	**95.12**	**94.37**	**96.33**	**95.71**	**95.27**
^{IV}Si	2.607	2.571	2.575	2.609	2.584	2.599	2.580	2.584	2.605	2.615
^{IV}Al	1.393	1.430	1.398	1.364	1.329	1.324	1.308	1.332	1.369	1.345
$^{IV}Fe^{3+}$	0.000	0.000	0.028	0.027	0.087	0.077	0.112	0.084	0.026	0.039
Σ T	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**
^{VI}Al	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
^{VI}Ti	0.396	0.437	0.400	0.387	0.446	0.404	0.408	0.441	0.391	0.363
$^{VI}Fe^{2+}$	0.575	0.538	0.629	0.520	0.449	0.500	0.641	0.469	0.558	0.538
^{VI}Mn	0.007	0.004	0.003	0.003	0.006	0.005	0.014	0.005	0.002	0.002
^{VI}Mg	1.772	1.819	1.766	1.899	1.866	1.888	1.711	1.867	1.855	1.937
Σ O	**2.750**	**2.798**	**2.798**	**2.809**	**2.766**	**2.798**	**2.773**	**2.783**	**2.806**	**2.840**
Ca	0.004	0.004	0.008	0.005	0.006	0.018	0.055	0.003	0.006	0.007
Na	0.062	0.057	0.085	0.072	0.067	0.058	0.063	0.066	0.084	0.090
K	0.852	0.829	0.862	0.859	0.850	0.858	0.850	0.853	0.853	0.853
Ba	0.000	0.000	0.022	0.019	0.044	0.032	0.046	0.038	0.015	0.014
Σ Intl.	**0.918**	**0.891**	**0.977**	**0.955**	**0.968**	**0.967**	**1.013**	**0.960**	**0.958**	**0.965**
F	0.022	0.030	0.022	0.019	0.025	0.029	0.029	0.025	0.020	0.016
Cl	0.000	0.000	0.002	0.006	0.006	0.000	0.000	0.000	0.004	0.000
OH	1.978	1.970	1.975	1.976	1.969	1.971	1.971	1.975	1.976	1.984
Mg#[3]	75.50	77.17	73.74	78.50	80.61	79.05	72.73	79.93	76.89	78.27
Group	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral	Trioctahedral
Modifier	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian	titanian octa-ferrian
Name	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite	phlogopite

[1] Crystal identification: mc = macrocrystal (1-10 mm) or mic = microcrystal (<1 mm). Adapted from Ubide et al. (2014b)

[2] Location: N = core; I = intermediate zone; B = rim; NI = intermediate zone closer to the core; IB = intermediate zone closer to the rim.

[3] Mg# = $(Mg/Fe^{2+}+Mg)x100$ in a.p.f.u.

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Table A10. Trace element concentrations (in ppm) of micas from the investigated dikes.

Dyke	MT-75	MT-75	MT-75	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A	MT-79A
Crystal[1]	1mc	1mc	1mc	1mic	4mc	4mc	5mc	9mc	9mc	10mc	10mc
Zone[2]	N	N2	I	N	N2	I	N	N	IB	B	N
Mg#[3]	76.20	76.70	75.40	75.60	77.10	77.60	76.60	73.30	80.00	72.20	78.00
Li	18.6	6.35	11.7	32.2	19.7	16.4	8.81	17.7	18.2	26.6	10.9
Ca	413	264	269	b.d.	b.d.	b.d.	b.d.	277	435	334	275
Sc	7.71	8.38	7.89	1.77	8.35	4.39	7.02	9.9	10.7	3.4	9.53
V	325	341	342	223	322	253	311	416	425	289	324
Cr	1029	1361	1305	6.35	1703	6.77	711	1558	1506	15.9	1147
Co	78.3	84.5	81	66.6	79.3	69.4	76	98.9	106	84.2	81.2
Ni	448	482	464	118	431	148	457	538	562	311	499
Rb	262	333	299	253	298	297	288	392	407	314	328
Sr	363	429	386	761	450	472	323	445	481	463	329
Y	0.263	0.267	0.268	7.09	0.496	0.866	0.159	0.378	0.377	0.581	0.219
Zr	14	19.5	17.5	54.4	18.9	24.7	14.2	19.1	23.4	28.5	14.3
Nb	21.8	21.9	20.4	55.3	24.3	37.2	18.1	23.7	30.7	47.5	16.1
Cs	1.59	2.71	2.16	1.5	2.01	1.38	2.12	3.01	2.46	2.15	2.08
Ba	5839	6939	5848	9127	8381	14761	4908	8893	11996	12842	6015
La	b.d.	0.056	b.d.	32.9	3.34	2.06	b.d.	0.093	0.116	0.215	0.048
Ce	b.d.	b.d.	b.d.	59.9	6.81	3.24	b.d.	b.d.	0.029	0.11	b.d.
Pr	b.d.	b.d.	b.d.	6.86	0.73	0.29	b.d.	b.d.	b.d.	0.027	0.034
Nd	b.d.	b.d.	b.d.	28.6	2.4	0.87	b.d.	b.d.	b.d.	b.d.	b.d.
Sm	b.d.	b.d.	b.d.	4.36	0.25	0.23	b.d.	b.d.	b.d.	b.d.	b.d.
Eu	0.197	0.241	0.172	2.14	0.464	0.89	0.312	0.55	0.53	0.52	0.274
Gd	b.d.	b.d.	b.d.	3.09	0.155	0.37	b.d.	0.35	b.d.	0.24	b.d.
Tb	b.d.	b.d.	b.d.	0.279	0.022	0.04	b.d.	0.023	b.d.	b.d.	b.d.
Dy	b.d.	b.d.	b.d.	0.52	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Ho	b.d.	b.d.	b.d.	0.35	b.d.	0.026	b.d.	b.d.	b.d.	b.d.	b.d.
Er	b.d.	b.d.	b.d.	0.54	0.095	0.071	0.081	b.d.	0.068	b.d.	b.d.
Tm	0.026	b.d.	b.d.	0.08	b.d.	b.d.	b.d.	b.d.	b.d.	0.022	b.d.
Yb	b.d.	b.d.	b.d.	0.34	0.142	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Lu	b.d.	b.d.	b.d.	0.087	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.	b.d.
Hf	0.41	0.51	0.5	0.8	0.55	0.56	b.d.	0.49	0.55	0.69	0.38
Ta	1.51	1.31	1.34	3.41	1.19	1.98	1.01	1.2	1.98	2.63	1.06
Pb	0.25	0.61	0.5	1.72	0.39	0.113	0.189	0.66	0.17	0.16	0.32
Th	b.d.	b.d.	b.d.	1.7	0.038	0.088	b.d.	0.009	b.d.	0.092	b.d.
U	b.d.	b.d.	0.007	0.07	b.d.	0.025	b.d.	0.009	0.056	0.119	0.011

[1] Crystal identification: mc = macrocrystal (10-1 mm) or mic = microcrystal (<1 mm) (adapted from Ubide et al., 2014b).

[2] Crystal zone: N = core; I = middle section; B = rim; NI = middle section closer to the core; IB = middle section closer to the rim.

[3] Mg# = (Mg/Fe2++Mg)x100 in a.p.f.u.

b.d.: below detection

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