

Reference	Sample	Country	Location1	Type	id	id2	id3	Group	Point	Tol	P2O5	Nd2O3	Ce2O3	La2O3	Fe2O3	Mn2O3	Al2O3	SrO	
MOSTMEG	MT#10	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT10_7_apati	1	2	41.773	0	0	0	0.3478	0	0	0.076	
MOSTMEG	MT#10	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT10_7_apati	1	2	41.773	0	0	0	0.3478	0	0	0.076	
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	1	2	43.122	0.034	0	0.064	0	0	0	0.174	
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	2	2	42.554	0.014	0.045	0.061	0	0	0	0.015	
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	3	2	42.345	0.039	0.089	0.089	0	0	0	0	
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_4_apatite	3	2	43.077	0.033	0.111	0.023	0	0	0	0	
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_6_apatite	1	2	43.279	0.067	0	0	0	0	0	0	
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	1	2	43.122	0.034	0	0.064	0	0	0	0.174	
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	2	2	42.554	0.014	0.045	0.061	0	0	0	0.015	
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	3	2	42.345	0.039	0.089	0.089	0	0	0	0	
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_4_apatite	3	2	43.077	0.033	0.111	0.023	0	0	0	0	
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_6_apatite	1	2	43.279	0.067	0	0	0	0	0	0	
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_2_apat	1	2	43.166	0.005	0.12	0	0	0	0	0	0.138
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_7_apat	2	2	42.593	0	0	0	0	0	0	0	
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_2_apat	1	2	43.166	0.005	0.12	0	0	0	0	0	0.138
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_7_apat	2	2	42.593	0	0	0	0	0	0	0	
MOSTMEG	ZEB-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-ZCONT1_5_apati	2	2	43.555	0.057	0.232	0.021	0	0	0	0	
MOSTMEG	ZEB-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-ZCONT1_5_apati	2	2	43.555	0.057	0.232	0.021	0	0	0	0	

Reference	Sample	Country	Location1	Type	id	id2	id3	Group	Point	FeO	MnO	CaO	MgO	Na2O	Cl	F	H2O	Total#
MOSTMEG	MT#10	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT10_7_apati	1	0.021	0.296	54.278	0.027	0.11	0.099	2.83	0.4011	100.259
MOSTMEG	MT#10	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT10_7_apati	1	0.021	0.296	54.278	0.027	0.11	0.099	2.83	0.4011	100.259
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	1	0.254	0.138	54.556	0.021	0.084	0.005	2.949	0.4033	101.8043
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	2	0.405	0.132	54.703	0.016	0.094	0.009	2.636	0.5387	101.2227
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	3	0.478	0.102	54.694	0.029	0.123	0.016	2.926	0.3955	101.3255
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_4_apatite	3	0.338	0.162	54.551	0.024	0.04	0.012	2.633	0.55	101.554
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_6_apatite	1	0.322	0.147	54.992	0.018	0.05	0	2.831	0.469	102.175
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	1	0.254	0.138	54.556	0.021	0.084	0.005	2.949	0.4033	101.8043
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	2	0.405	0.132	54.703	0.016	0.094	0.009	2.636	0.5387	101.2227
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	3	0.478	0.102	54.694	0.029	0.123	0.016	2.926	0.3955	101.3255
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_4_apatite	3	0.338	0.162	54.551	0.024	0.04	0.012	2.633	0.55	101.554
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_6_apatite	1	0.322	0.147	54.992	0.018	0.05	0	2.831	0.469	102.175
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_2_apat	1	0.536	1.163	53.498	0.052	0.058	0.01	2.756	0.4945	101.9965
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_7_apat	2	0.539	0.749	53.609	0.077	0.127	0.01	2.779	0.4658	100.9488
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_2_apat	1	0.536	1.163	53.498	0.052	0.058	0.01	2.756	0.4945	101.9965
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_7_apat	2	0.539	0.749	53.609	0.077	0.127	0.01	2.779	0.4658	100.9488
MOSTMEG	ZEB-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-ZCONT1_5_apati	2	1.698	0.296	53.33	0.132	0.161	0.088	2.773	0.4801	102.8231
MOSTMEG	ZEB-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-ZCONT1_5_apati	2	1.698	0.296	53.33	0.132	0.161	0.088	2.773	0.4801	102.8231

Reference	Sample	Country	Location1	Type	id	id2	id3	Group	Point	O=F	O=Cl	Total	P5+	Total	Nd3+	Ce3+
MOSTMEG	MT#10	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT10_7_apati	1	-1.1916	-0.0223	99.045	2.9986	2.9986	0	0
MOSTMEG	MT#10	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT10_7_apati	1	-1.1916	-0.0223	99.045	2.9986	2.9986	0	0
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	1	-1.2417	-0.0011	100.5615	3.0358	3.0358	0.001	0
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	2	-1.1099	-0.002	100.1107	3.0159	3.0159	0.0004	0.0014
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	3	-1.2321	-0.0036	100.0899	3.0076	3.0076	0.0012	0.0027
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_4_apatite	3	-1.1087	-0.0027	100.4427	3.0349	3.0349	0.001	0.0034
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_6_apatite	1	-1.1921	0	100.983	3.0326	3.0326	0.002	0
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	1	-1.2417	-0.0011	100.5615	3.0358	3.0358	0.001	0
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	2	-1.1099	-0.002	100.1107	3.0159	3.0159	0.0004	0.0014
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	3	-1.2321	-0.0036	100.0899	3.0076	3.0076	0.0012	0.0027
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_4_apatite	3	-1.1087	-0.0027	100.4427	3.0349	3.0349	0.001	0.0034
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_6_apatite	1	-1.1921	0	100.983	3.0326	3.0326	0.002	0
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_2_apat	1	-1.1605	-0.0023	100.8338	3.0373	3.0373	0.0001	0.0037
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_7_apat	2	-1.1702	-0.0023	99.7764	3.0269	3.0269	0	0
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_2_apat	1	-1.1605	-0.0023	100.8338	3.0373	3.0373	0.0001	0.0037
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_7_apat	2	-1.1702	-0.0023	99.7764	3.0269	3.0269	0	0
MOSTMEG	ZEB-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-ZCONT1_5_apati	2	-1.1676	-0.0199	101.6356	3.042	3.042	0.0017	0.007
MOSTMEG	ZEB-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-ZCONT1_5_apati	2	-1.1676	-0.0199	101.6356	3.042	3.042	0.0017	0.007

Reference	Sample	Country	Location1	Type	id	id2	id3	Group	Point	La3+	Fe3+	Mn3+	Al3+	Sr2+	Fe2+	Mn2+	Ca2+	Mg2+
MOSTMEG	MT#10	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT10_7_apati	1	0	0.0222	0	0	0.0037	0.0015	0.0213	4.9312	0.0034
MOSTMEG	MT#10	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT10_7_apati	1	0	0.0222	0	0	0.0037	0.0015	0.0213	4.9312	0.0034
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	1	0.002	0	0	0	0.0084	0.0177	0.0097	4.8609	0.0026
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	2	0.0019	0	0	0	0.0007	0.0284	0.0094	4.9067	0.002
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	3	0.0028	0	0	0	0	0.0335	0.0072	4.9166	0.0036
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_4_apatite	3	0.0007	0	0	0	0	0.0235	0.0114	4.8641	0.003
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_6_apatite	1	0	0	0	0	0	0.0223	0.0103	4.8768	0.0022
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	1	0.002	0	0	0	0.0084	0.0177	0.0097	4.8609	0.0026
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	2	0.0019	0	0	0	0.0007	0.0284	0.0094	4.9067	0.002
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	3	0.0028	0	0	0	0	0.0335	0.0072	4.9166	0.0036
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_4_apatite	3	0.0007	0	0	0	0	0.0235	0.0114	4.8641	0.003
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_6_apatite	1	0	0	0	0	0	0.0223	0.0103	4.8768	0.0022
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_2_apat	1	0	0	0	0	0.0067	0.0373	0.0819	4.7641	0.0064
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_7_apat	2	0	0	0	0	0	0.0378	0.0533	4.8217	0.0096
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_2_apat	1	0	0	0	0	0.0067	0.0373	0.0819	4.7641	0.0064
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_7_apat	2	0	0	0	0	0	0.0378	0.0533	4.8217	0.0096
MOSTMEG	ZEB-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-ZCONT1_5_apati	2	0.0006	0	0	0	0	0.1172	0.0207	4.7141	0.0162
MOSTMEG	ZEB-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-ZCONT1_5_apati	2	0.0006	0	0	0	0	0.1172	0.0207	4.7141	0.0162

Reference	Sample	Country	Location1	Type	id	id2	id3	Group	Point	Na+	Total	OH-	Cl-	F-	Total
MOSTMEG	MT#10	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT10_7_apati	1	0.0181	5.0014	0.2269	0.0142	0.7589	1
MOSTMEG	MT#10	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT10_7_apati	1	0.0181	5.0014	0.2269	0.0142	0.7589	1
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	1	0.0135	4.9158	0.2237	0.0007	0.7756	1
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	2	0.0153	4.9661	0.3008	0.0013	0.6979	1
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	3	0.02	4.9876	0.2214	0.0023	0.7764	1
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_4_apatite	3	0.0065	4.9135	0.3053	0.0017	0.693	1
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_6_apatite	1	0.008	4.9216	0.259	0	0.741	1
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	1	0.0135	4.9158	0.2237	0.0007	0.7756	1
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	2	0.0153	4.9661	0.3008	0.0013	0.6979	1
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_2_apatite	3	0.02	4.9876	0.2214	0.0023	0.7764	1
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_4_apatite	3	0.0065	4.9135	0.3053	0.0017	0.693	1
MOSTMEG	MT#11	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-MT11_6_apatite	1	0.008	4.9216	0.259	0	0.741	1
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_2_apat	1	0.0093	4.9095	0.2742	0.0014	0.7244	1
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_7_apat	2	0.0207	4.9431	0.2608	0.0014	0.7378	1
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_2_apat	1	0.0093	4.9095	0.2742	0.0014	0.7244	1
MOSTMEG	P-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-P-CONT1_7_apat	2	0.0207	4.9431	0.2608	0.0014	0.7378	1
MOSTMEG	ZEB-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-ZCONT1_5_apati	2	0.0258	4.9032	0.2642	0.0123	0.7235	1
MOSTMEG	ZEB-CONT#1	Portugal	CIZ	XM	BG_PT	MT	MTu	MOSTMEG_lvo-ZCONT1_5_apati	2	0.0258	4.9032	0.2642	0.0123	0.7235	1