

APPENDIX 2

SOM: Raman and FTIR ATR analyses of the Csátalja-2 sample with FWHM values and optical microscopical descriptions of the measuring areas

0a	0b		1	2	3-5			6	7-9			10
	Measuring area		EMPA composition	Reference Raman bands of unshocked minerals (px: Huang et al. 2000, ol: Kuebler et al. 2006, fp: Freeman et al. 2008) and shock induced shift (cm ⁻¹)	Raman			Reference IR bands of unshocked minerals (px: Lafaunte et al. 2015, ol: Lane et al. 2010) and shock induced shift (cm ⁻¹)	FTIR-ATR			Optical microscopy
IR area name	zone	measuring point	Oxide composition and mineral endmember		Raman band (cm ⁻¹)	FWHM (cm ⁻¹)	identified mineral		IR band (cm ⁻¹)	IR FWHM values (cm ⁻¹) of v1 (px, ol), v2(ol) vibration	identified mineral	
akim5random fp	D1a5	IR1	Na2O 5,17% MgO 2,24% Al2O3 18,58% SiO2 57,94% K2O 3,92% CaO 4,34% FeOx 7,81% An24Ab51Or25	Or16Ab59An15 511 (-1), 476 (-3), 282 (+1)	1008 (px), 681 (px), 661 (px); 510 (fp), 473 (fp), 281 (fp)	1008 px (20), 512 fp (15),	enstatite; anorthoclase	RRUFF labradorite (R050104-1 738 (-15), 930 (+24),	723, 954	88 an	anorthite	large clast in the melt pocket with selective melting along the fractures and grain boundaries. The upper part of the clast is characterised by dense subgrain structure. (S5)
		IR2	Na2O 4,18% MgO 20,33% Al2O3 10,88% SiO2 46,67% P2O5 0,00% K2O 0,72% CaO 1,48% TiO2 0,00% FeOx 15,74% Wo3En67Fs29	En.72Fs.26Wo.03 335 (-14) , 394 (-8) , 670 (+5), 1003 (+9)	1012 (px), 665 (px), 386 (px), 321 (px)	1011px (15)	diopside	RRUFF enstatite (R050644-1) 645 (-9), 725 (-4), 856 (+11),	636, 721, 867sh, 956s	60 an	anorthite with trace of augite	
		IR3	Na2O 7,18% MgO 4,48% Al2O3 19,16% SiO2 56,25% K2O 1,87% CaO 2,12% FeOx 8,94% An12Ab75Or13	Or16Ab59An15 511 (-1), 476 (-3), 282 (+1)	1008 (px), 681 (px), 661 (px); 510 (fp), 473 (fp), 281 (fp); 852 (ol), 821 (ol)	sok fp! (80%), 510 fp (13), 821 (19), 853 (16) ol, 1011 (22)	enstatite; anorthoclase; forsterite	RRUFF oligoclase (R070268-1 642 (-8), 749 (-24), 992 (-42),	636, 725, 877, 950s	75 an	anorthite with trace of enstatite	
		IR4	Na2O 5,63% MgO 4,39% Al2O3 17,36% SiO2 50,28% K2O 0,54% CaO 2,07% FeOx 19,73% An16Ab79Or5	Ab80An20: 480 (-1), 511 (-1)	1012 (px), 665 (px), 686 (px), 321 (px); 510 (fp), 479 (fp)	510 fp (15), 1011 px (14)	diopside; anorthoclase/ labradorite	RRUFF oligoclase (R070268-1) 642 (-8), 749 (-26), 992 (-32),	636, 723, 865sh, 960s	84 an	anorthite with trace of augite	
akim10with fp	D1a10	IR1	MgO 39,34% SiO2 30,96% MnO 0,39% FeOx 29,31% Fo70	Fo70= 819 (+2), 850 (+2)	852 (ol), 821 (ol)	821 ol (18), 852 (16)	forsterite	Fo70: 997 (-10) 969 (-21) 864 (+3) 833 (+2)	sp2 835, 867 ol, 898, 948sh, 987 sh	20, 36	forsterite	Shock- annealed clast in melt pocket, selective melting along the fractures and subgrain boundaries (S5)
		IR2	Na2O 7,56% MgO 0,78% Al2O3 21,89% SiO2 63,49% K2O 0,77% CaO 2,86% FeOx 2,65% An16.4Ab78.3Or5.3	Ab80An20 511 (0)	1012 (px), 665 (px), 386 (px), 321 511 (fp) (px); 852 (ol), 821 (ol)	1012 px (16), 853 ol (14), 824 ol (17), 511 fp (15)	diopside; forsterite feldspar	RRUFF oligoclase (R070268-1), 749 (-28), 992 (-32),	sp1 721, 867, 929, 964 sh	23 px	anorthite, augite	
		IR3	MgO 26,58% SiO2 49,02% CaO 5,96% TiO2 0,36% FeOx 18,08% Wo10En65Fs24	En.72Fs.26Wo.03 335 (--4) , 657 (+4) , 670 (+13), 1003 (+7)	1010 (px), 681 (px), 661 (px), 339 (px)	1010 (23) px	enstatite	RRUFF enstatite (R050644-1) 645 (-7), 689 (-3), 725 (-2), 856 (+13), 920 (+3), 1007 (+24), 1060 (-15),	sp4 638, 686, 723, 869, 923, 983, 1045	70 fp	enstatite	

		IR4	Na2O 8,70% MgO 0,00% Al2O3 21,92% SiO2 61,41% K2O 1,15% CaO 2,28% FeOx 4,55% An12Ab81Or7	Or26Ab65An9 479 (0) 510 (-2)	1012 (px), 663 (px); 508 (fp), 479 (fp)	508 (14) fp (66%), 1011 (18)	diopside; anorthoclase/ labradorite	RRUFF oligoclase (R070268-1) 642 (-8), 749 (-28), 992 (+32), 1103 (+24),	sp3 636, 721, 944s, 1012sh, 1089sh	31 px 24 fp	labradorite	
(IR area akkim3-4)	D11	IR1	Na2O 8,20% Al2O3 22,13% SiO2 62,77% K2O 0,66% CaO 2,35% TiO2 0,00% FeOx 3,90% An13Ab83Or4	Oligoclase Or1Ab76An23 511 (-1), 480 (-1)	1008 (px), 681 (px), 661 (px); 510 (fp), 479 (fp)	1009 px (30) (60%) 512 fp (13) (40%),	enstatite; anorthoclase/ labradorite	RRUFF oligoclase (R070268-1) 642 (-10), 749 (-28), 992 (-26),	632, 721, 868, 920, 966	25 (v1 px)	enstatite +traces of anorthite	mixed mineral clast with melting along the fractures and subgrain boundaries. Pyroxene shows strong mosaic structure and isotropic patches. (S6)
		IR2	Na2O 5,95% MgO 4,50% Al2O3 18,64% SiO2 58,00% P2O5 3,14% K2O 0,54% CaO 4,22% FeOx 5,01% An27Ab69Or4	Oligoclase Or1Ab76An23 511 (-1), 480 (0)	1012 (px), 663 (px); 510 (fp), 480 (fp); 852 (ol), 821(ol)	1013 (14) (10%), 854 (14) (10%), 818 (18), 511 (17)fp (75%)	diopside; anorthoclase; forsterite	RRUFF oligoclase (R070268-1) 642 (-10), 992 (-34),	632, 671, 858, 956, 1056	39 (px)	diopside	
		IR3	Na2O 1,91% MgO 12,40% Al2O3 6,27% SiO2 55,05% K2O 0,47% CaO 15,92% FeOx 7,98% NiO 0,00% Wo40En44Fs16	En.46Fs.09Wo.44 323 (-2), 387 (-1), 662 (+1) 1007 (+5)	1012 (px), 663 (px), 386 (px), 321 (px); 511 (fp)	1012 (16) px	diopside; anorthoclase	RRUFF diopside (R040009-1) 632 (+6), 672 (+10), 858 (+12), 917 (+3), 960 (+13), 1067 (-34)	638, 682, 723, 870, 920, 973, 1035	33, 17 (px)	enstatite	
		IR4	Na2O 4,69% MgO 2,49% Al2O3 18,40% SiO2 63,89% K2O 1,27% CaO 5,75% FeOx 3,51% An36.5Ab54Or9.5	andesine Or2Ab56An42 482 (-3), 511 (-1)	1012 (px), 663 (px), 386 (px), 321 (px); 510 (fp), 479 (fp); 852 (ol), 821 (ol)	1011 px (15), 854 (13), 824 (12)ol, 509 (14) fp	diopside; anorthoclase; forsterite	RRUFF labradorite (R050104-1) 930 (-14), 983 (-12),	670, 837, 864, 906, 971	11, 26 (ol)	Forsterite	
		IR5	Na2O 5,20% MgO 3,29% Al2O3 18,33% SiO2 63,24% K2O 0,76% CaO 6,01% FeOx 3,18% An37Ab58Or5	andesine Or2Ab56An42 482 (-3), 511 (-1)	1012 (px), 663 (px); 852 (ol), 821 (ol); 510 (fp), 479 (fp)	1012 px (18), 852 (14), 824 ol (16), 510 fp (14)	diopside; forsterite, anorthoclase	RRUFF labradorite (R050104-1) 626 (-14), 738 (-15), 930 (-10), 983 (+19),	638, 723, 869s, 920s, 952sh, 1002sh	31, 40 (px v1, an)	enstatite + anorthite	
		IR6	Na2O 7,56% Al2O3 22,80% SiO2 65,06% K2O 0,90% CaO 2,44% Cr2O3 0,00% FeOx 1,23% An14Ab80Or6	oligoclase Or1Ab76An23 480 (-1), 511 (-1)	1012 (px), 663 (px), 386 (px), 321 (px); 510 (fp), 479 (fp); 852 (ol), 821 (ol)	1012 (20) px, 511 (14) fp (80%), trace ol 854 (15), 823 (32)	diopside; anorthoclase; forsterite	RRUFF oligoclase (R070268-1) 642 (-8), 749 (-26), 992 (-18),	636, 723, 868s, 918s, 984sh, 1039sh	33 (px)	enstatite + anorthite	
akim7px	D17a7		MgO 30,29% SiO2 47,05% CaO 0,61% Cr2O3 0,54% MnO 0,43% FeOx 21,09% Wo1En71Fs28	En.72Fs.26Wo.03 335 (+4), 657 (+4) 670 (+11), 1003 (+6)	1009 (px), 681 (px), 661 (px), 339 (px)	1007 px (17),	enstatite	RRUFF enstatite (R050644-1) 645 (-5), 689 (-1), 725 (-2), 856(+8), 920 (-2), 1007 (-2), 1060 (-10),	640, 688, 723, 864, 918, 1005, 1050	43 px	enstatite	shocked pyroxene (S3)