

VESPA Dating Study Supplemental File 3

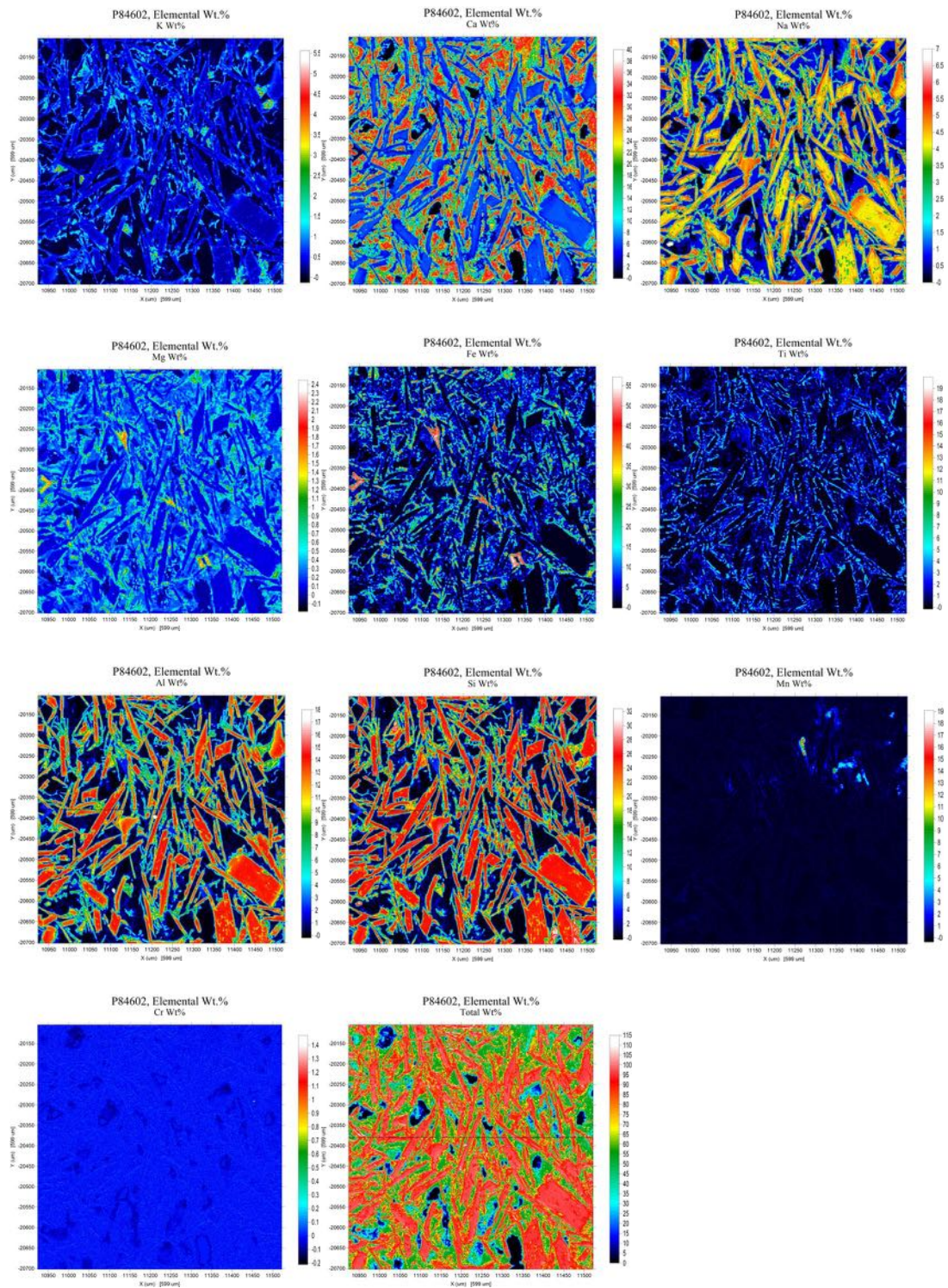
Electron Microprobe Work

X-ray element maps and spot mineral analyses of 0.6 x 0.6 mm groundmass areas of eight dated VESPA lavas

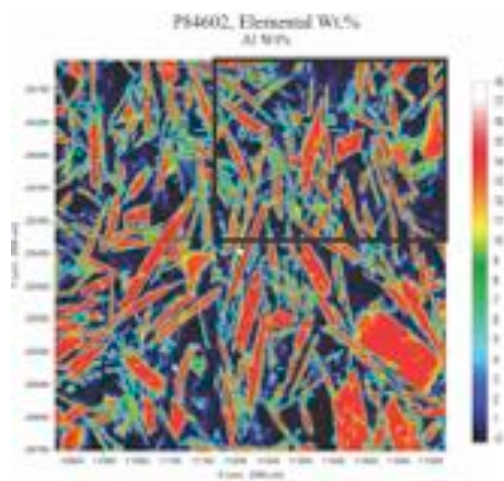
DR08A (P84602)
DR10A (P84607)
DR13Aii (P84621)
DR24Bii (P84707)
DR27B (P84733)
DR33Ai (P84761)
DR36B (P84771)
DR41Aii (P84798)

Note: some MnO and Cr₂O₃ analyses are given as negative values. These are below detection limit.

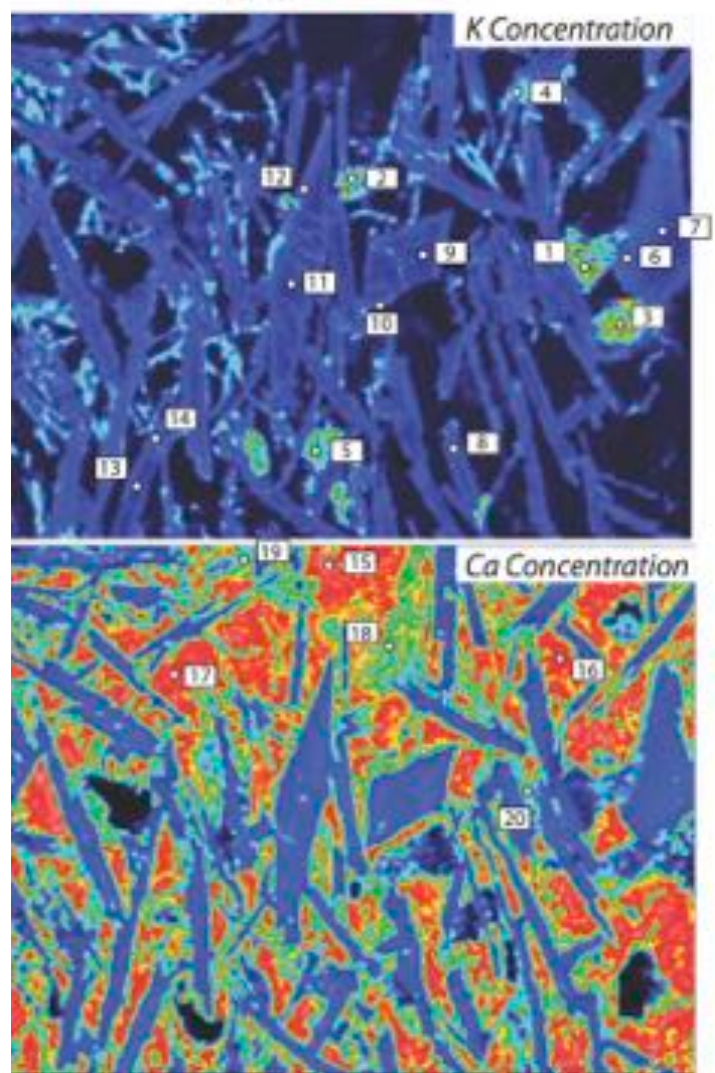
P84602 Element maps



P84602 Spot analysis maps



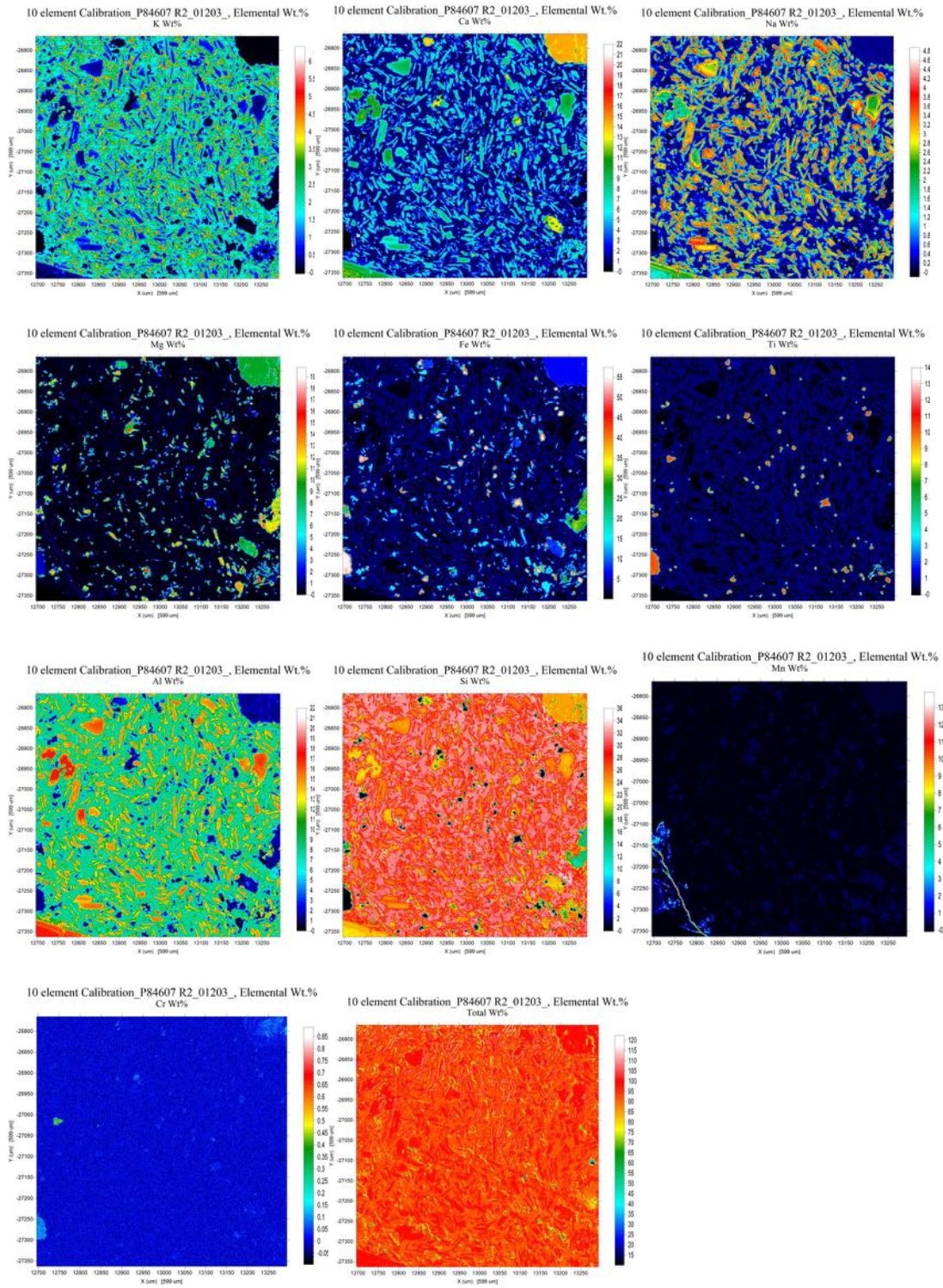
- (a) Spots 1 to 5: Late interstitial high K phase - K-rich clay? or zeolite
- (b) Spots 7 to 14: Groundmass plagioclase laths cores and rims
- (c) Spots 15 to 20: High Ca interstitial phases (calcite? pyroxene)



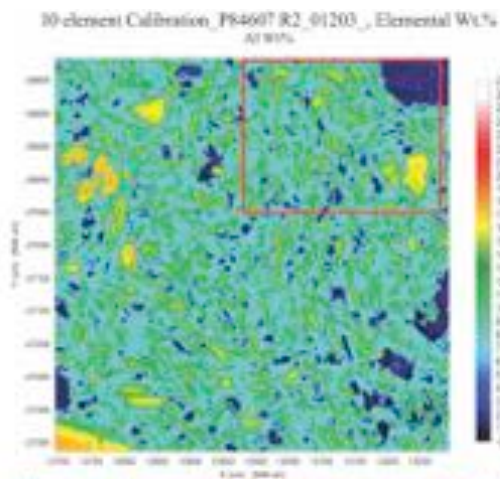
P84602 Spot analyses

Spot	SiO2	TiO2	Al2O3	FeOT	MnO	MgO	CaO	Na2O	K2O	Cr2O3	Total	K/Ca (atom)
P84602_001	47.70	1.08	18.60	3.55	0.05	0.29	14.02	1.07	1.47	-0.02	87.80	0.125
P84602_002	27.33	3.67	10.82	36.48	1.20	1.53	7.49	0.25	0.39	0.01	89.18	0.063
P84602_003	55.04	0.63	21.21	2.21	0.04	0.19	6.54	2.83	4.67	0.00	93.37	0.851
P84602_004	45.90	1.60	12.73	4.04	0.11	0.23	14.65	3.68	1.85	0.01	84.79	0.151
P84602_005	49.09	1.39	17.86	6.08	0.15	0.21	10.44	1.31	0.97	0.00	87.50	0.110
P84602_006	56.52	0.92	23.97	1.64	0.02	0.14	7.76	6.65	0.63	0.00	98.24	0.096
P84602_007	57.56	0.20	26.10	1.09	0.00	0.11	8.61	6.27	0.47	0.00	100.41	0.064
P84602_008	56.59	0.20	26.21	0.78	0.03	0.11	8.60	6.36	0.46	-0.02	99.31	0.064
P84602_009	55.26	0.12	27.16	0.75	0.02	0.10	9.49	5.90	0.40	0.00	99.21	0.051
P84602_010	58.25	0.35	21.51	1.23	0.06	0.13	7.40	6.58	1.06	-0.02	96.54	0.170
P84602_011	56.14	0.14	26.50	1.01	0.04	0.11	8.99	6.10	0.39	0.00	99.42	0.052
P84602_012	60.63	0.10	23.67	0.98	0.03	0.08	5.84	7.50	0.93	-0.01	99.74	0.189
P84602_013	56.81	0.19	26.69	0.83	0.01	0.12	9.17	6.08	0.41	0.01	100.32	0.053
P84602_014	56.72	0.10	26.73	0.83	0.01	0.09	9.12	6.05	0.44	-0.01	100.08	0.057
P84602_015	1.30	1.85	0.61	9.60	0.15	0.53	42.45	0.76	0.04	-0.03	57.25	0.001
P84602_016	0.24	0.80	0.16	3.11	0.04	0.40	49.49	1.10	0.05	-0.01	55.38	0.001
P84602_017	0.61	0.99	0.32	5.04	0.03	0.42	46.79	0.93	0.04	-0.02	55.15	0.001
P84602_018	12.10	1.78	3.77	4.96	0.10	0.47	38.36	2.21	0.50	-0.02	64.23	0.016
P84602_019	0.66	0.47	0.30	3.55	0.04	0.43	48.42	0.95	0.04	-0.01	54.85	0.001
P84602_020	1.35	4.22	0.38	7.27	0.12	0.53	43.06	0.95	0.03	-0.01	57.90	0.001

P84607 Element maps



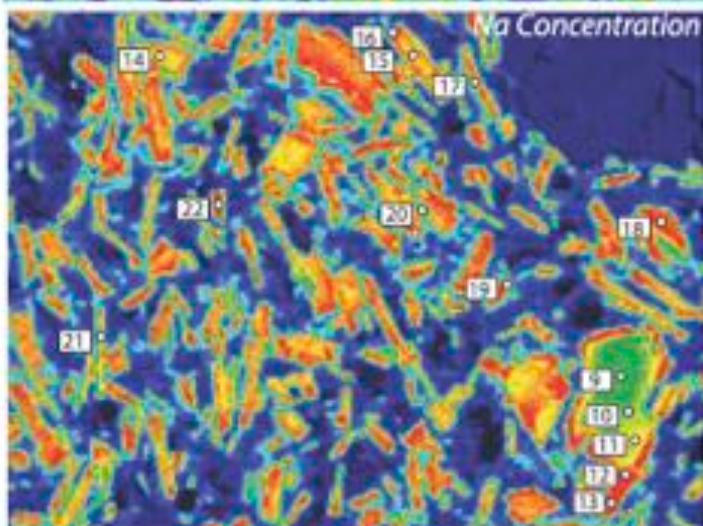
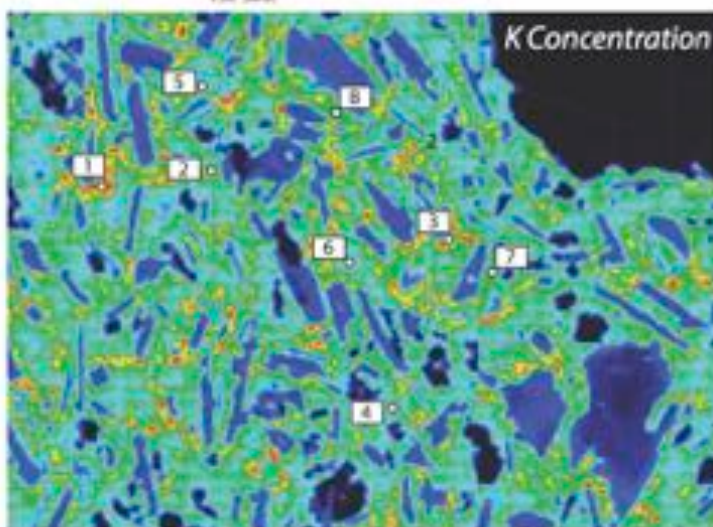
P84607 Spot analysis maps



(a) Spots 1 to 3: tiny blebs of very high K phase - likely zeolite

(b) Spots 4 to 7: groundmass glass - prob need to enlarge beam for Na, but avoid plagioclase and oxides

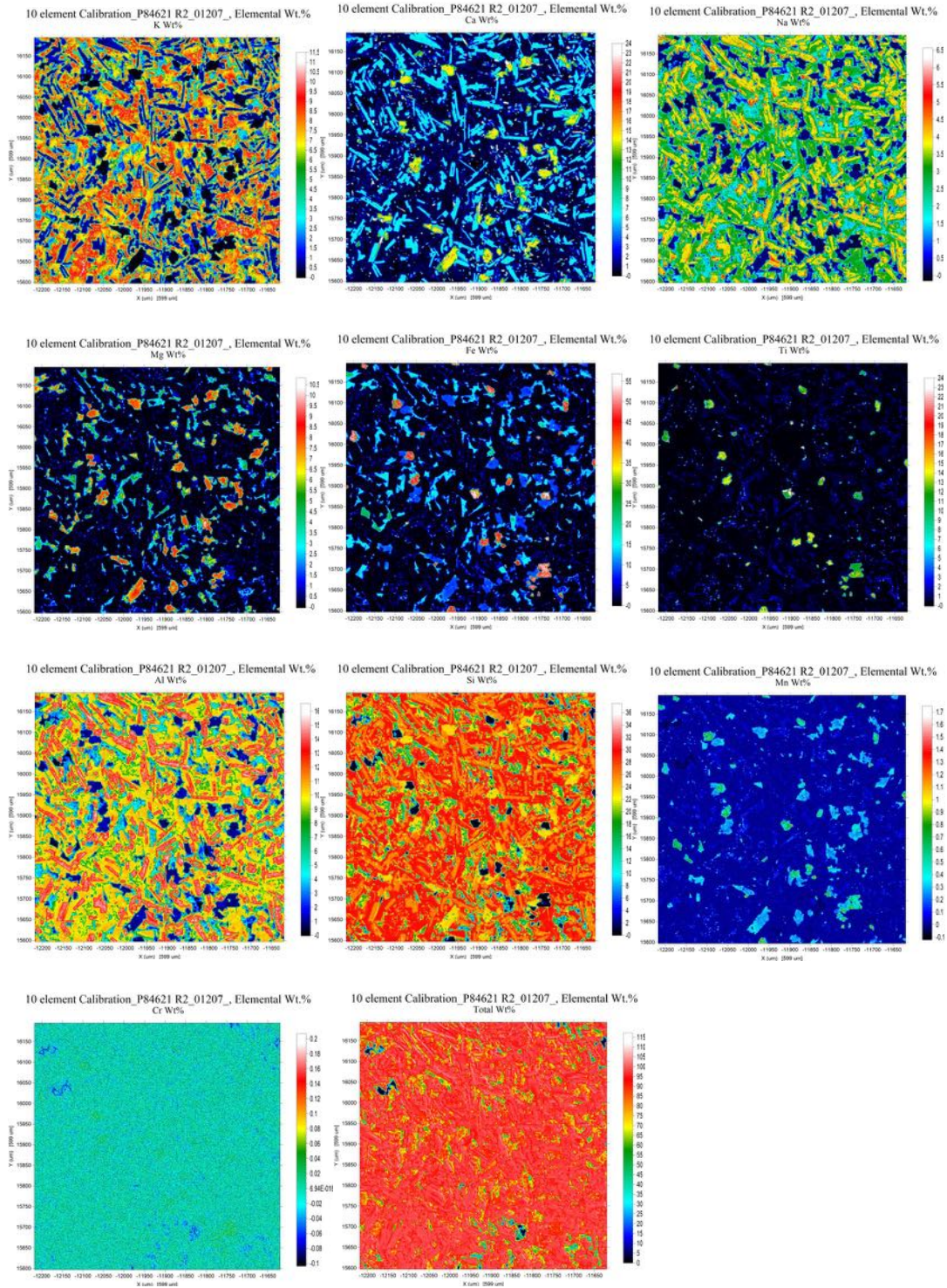
(c) Spots 9 to 22: mix of larger resorbed plagioclase and small euhedral crystals. Want to look at zonation in larger plagioclase and range of compositions of small laths, also to see if there are thin anorthoclase overgrowths on some of the plagioclase



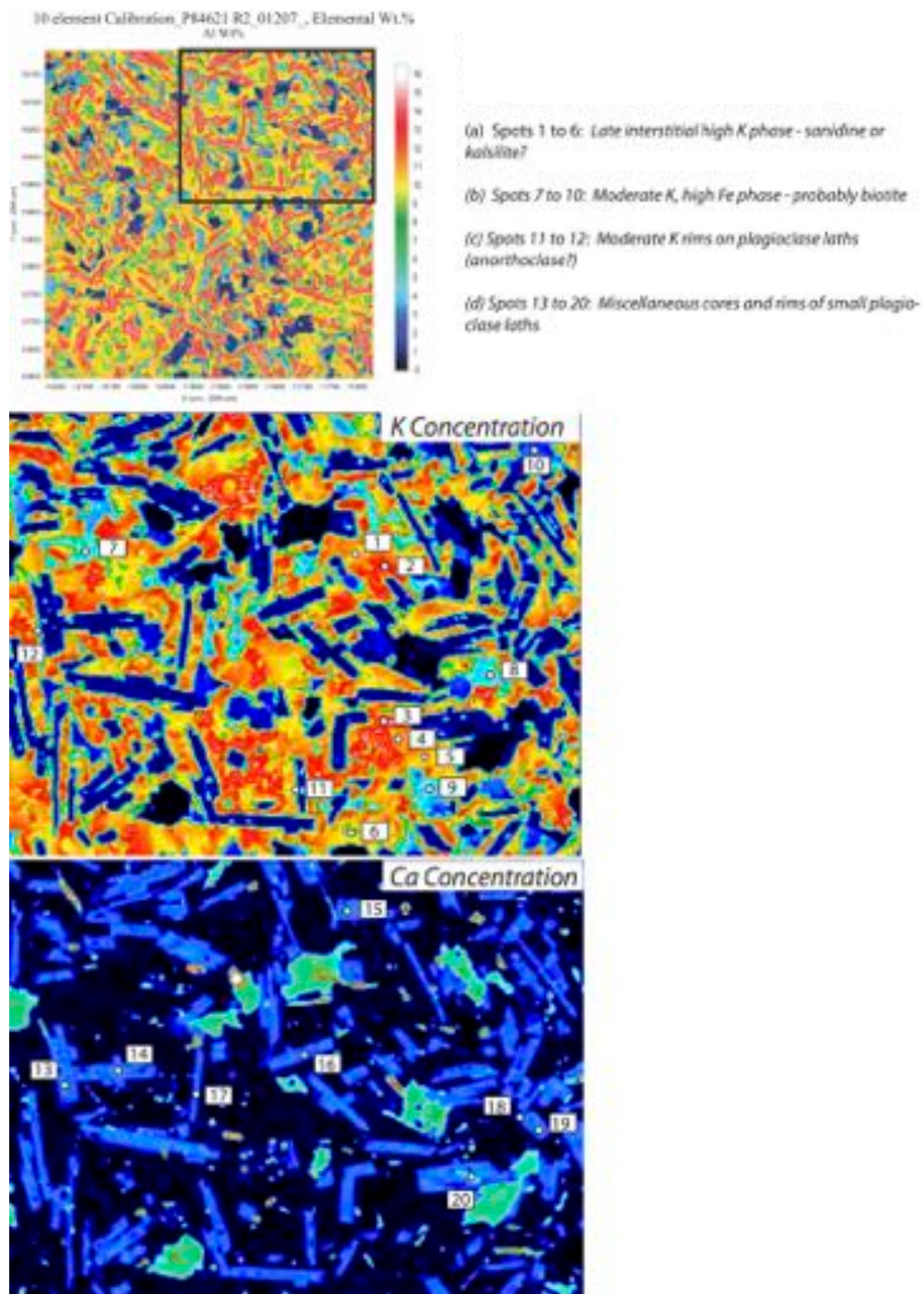
P84607 Spot analyses

Spot	SiO2	TiO2	Al2O3	FeOT	MnO	MgO	CaO	Na2O	K2O	Cr2O3	Total	K/Ca (atom)
P84607_001	68.19	0.89	14.09	3.94	0.04	0.65	1.47	0.17	0.48	-0.01	89.92	0.391
P84607_002	54.98	0.13	25.31	1.01	0.00	0.18	8.92	5.26	1.17	-0.03	96.94	0.156
P84607_003	68.67	1.33	14.02	3.25	0.05	0.41	1.03	0.11	0.40	-0.01	89.27	0.460
P84607_004	68.90	1.05	14.05	3.48	0.04	0.38	1.06	0.08	0.22	-0.01	89.26	0.249
P84607_005	67.83	1.24	13.74	3.89	0.11	0.65	1.39	0.16	0.57	0.02	89.60	0.491
P84607_006	67.66	0.97	14.00	3.92	0.07	0.53	1.40	0.08	0.39	-0.01	89.02	0.327
P84607_007	67.18	0.98	14.64	3.68	0.07	0.55	2.16	0.82	1.20	0.01	91.28	0.658
P84607_008	66.86	1.14	14.35	4.04	0.06	0.61	1.99	0.64	0.73	-0.01	90.42	0.437
P84607_009	48.61	0.06	30.50	0.87	0.02	0.11	14.11	3.04	0.34	0.01	97.67	0.028
P84607_010	49.39	0.04	29.81	0.91	-0.01	0.13	13.41	3.45	0.38	-0.01	97.49	0.034
P84607_011	50.36	0.12	28.64	1.04	0.03	0.12	12.30	3.92	0.54	0.01	97.07	0.052
P84607_012	54.22	0.11	26.48	0.75	0.00	0.09	9.63	5.20	0.98	0.01	97.46	0.121
P84607_013	55.16	0.08	25.46	0.75	0.02	0.10	8.96	5.09	1.22	-0.01	96.83	0.162
P84607_014	50.86	0.02	28.58	0.85	0.00	0.10	12.01	3.84	0.67	-0.01	96.92	0.066
P84607_015	51.73	0.09	28.55	0.99	0.02	0.12	11.84	4.23	0.62	0.02	98.20	0.062
P84607_016	50.63	0.04	28.31	1.01	0.01	0.12	12.06	3.96	0.58	0.00	96.71	0.057
P84607_017	53.67	0.10	26.51	1.09	0.01	0.15	10.01	4.48	0.92	0.01	96.94	0.110
P84607_018	53.55	0.01	27.14	0.87	0.03	0.09	10.26	5.13	0.86	0.03	97.96	0.099
P84607_019	60.44	0.50	20.67	1.83	0.03	0.27	6.17	3.40	1.05	0.01	94.37	0.204
P84607_020	66.38	1.06	14.90	4.11	0.10	0.71	2.29	0.99	1.93	0.00	92.48	1.007
P84607_021	53.28	0.23	26.82	1.58	0.01	0.15	10.43	4.34	0.83	-0.02	97.66	0.095
P84607_022	55.05	0.05	25.56	0.84	0.02	0.12	9.07	5.17	1.22	0.00	97.08	0.160

P84621 Element maps



P84621 Spot analysis maps

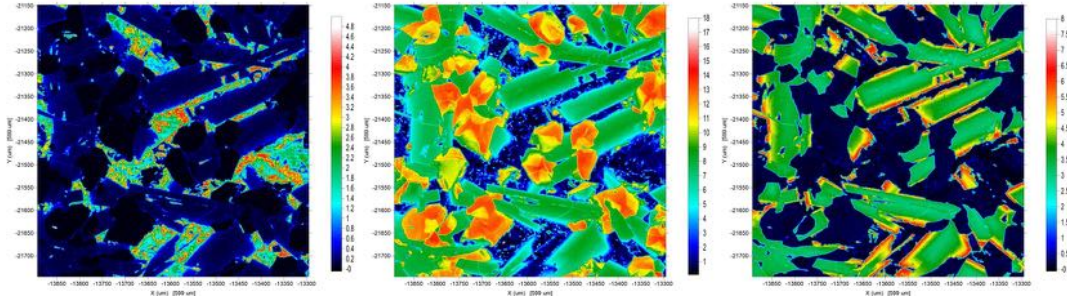


P84621 Spot analyses

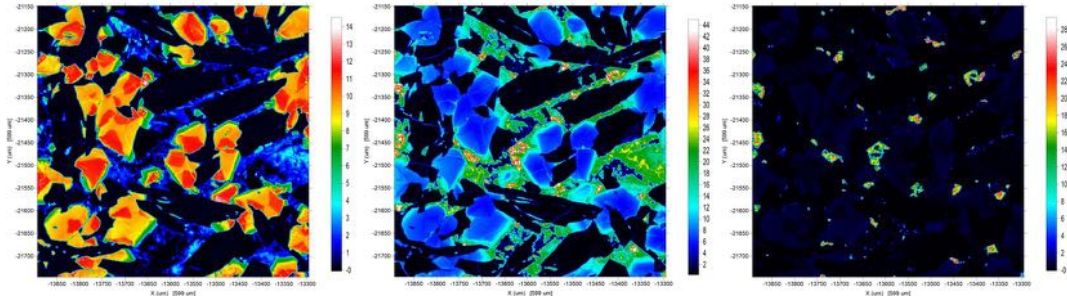
Spot	SiO2	TiO2	Al2O3	FeOT	MnO	MgO	CaO	Na2O	K2O	Cr2O3	Total	K/Ca (atom)
P84621_001	62.49	0.19	19.13	0.34	0.01	0.00	0.88	4.02	10.09	0.01	97.16	13.607
P84621_002	63.65	0.25	19.04	0.31	0.01	0.00	0.75	3.83	10.71	-0.02	98.54	16.971
P84621_003	55.12	0.11	26.32	0.79	0.00	0.09	9.17	5.42	0.93	0.01	97.97	0.121
P84621_004	62.78	0.22	19.23	0.33	0.01	0.00	1.02	4.33	9.20	0.00	97.11	10.780
P84621_005	62.95	0.24	19.89	0.35	0.01	0.01	1.34	4.59	8.97	0.00	98.36	7.949
P84621_006	62.19	0.16	20.07	0.78	0.00	0.13	1.74	4.63	7.82	-0.01	97.50	5.356
P84621_007	44.47	1.27	8.53	16.84	0.09	6.10	1.21	1.17	3.15	0.00	82.82	3.101
P84621_008	36.10	1.27	5.90	21.34	0.07	6.15	1.16	0.58	3.38	0.00	75.96	3.477
P84621_009	48.96	1.08	10.20	16.30	0.05	4.13	0.96	0.59	3.89	0.00	86.17	4.828
P84621_010	16.48	0.21	2.50	11.56	-0.01	7.25	0.93	0.78	1.40	-0.04	41.05	1.807
P84621_011	63.46	0.20	19.56	0.32	0.00	0.00	1.24	4.35	9.42	0.01	98.56	9.022
P84621_012	63.58	0.25	21.10	0.35	0.02	0.03	2.72	6.38	4.99	0.00	99.42	2.180
P84621_013	54.61	0.14	27.75	0.70	0.01	0.07	10.10	5.14	0.66	0.01	99.19	0.078
P84621_014	54.09	0.09	26.94	0.93	0.01	0.14	9.81	5.13	0.84	-0.02	97.96	0.101
P84621_015	63.69	0.25	19.97	0.31	-0.01	0.01	1.43	4.31	9.61	-0.01	99.55	8.005
P84621_016	61.52	0.12	22.53	0.46	-0.01	0.05	4.48	6.42	3.33	0.01	98.92	0.884
P84621_017	55.06	0.10	27.17	0.77	0.01	0.08	9.83	5.39	0.63	-0.02	99.00	0.076
P84621_018	55.63	0.11	26.62	0.68	0.03	0.05	9.22	5.74	0.84	0.01	98.92	0.108
P84621_019	55.42	0.11	26.82	0.91	0.02	0.09	9.51	5.32	0.80	0.00	99.01	0.100
P84621_020	63.66	0.18	19.36	0.42	-0.01	0.02	0.98	3.52	10.29	0.02	98.44	12.474

P84707 Element maps

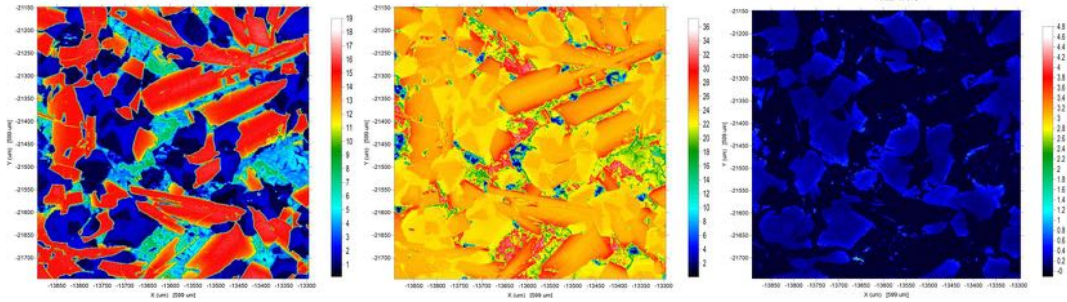
10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.% 10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.% 10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.%



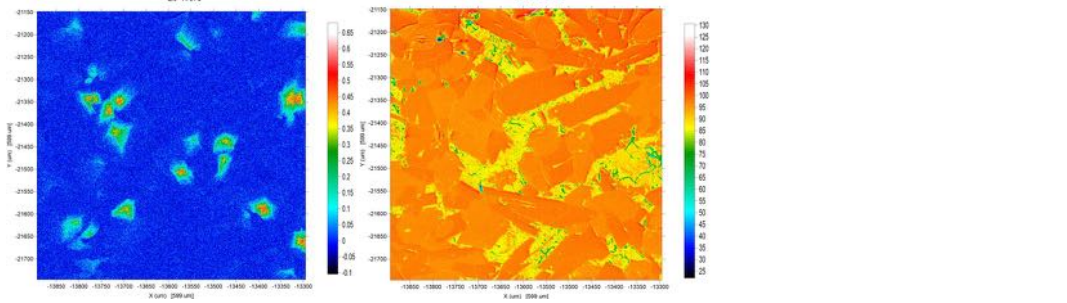
10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.% 10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.% 10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.%



10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.% 10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.% 10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.%

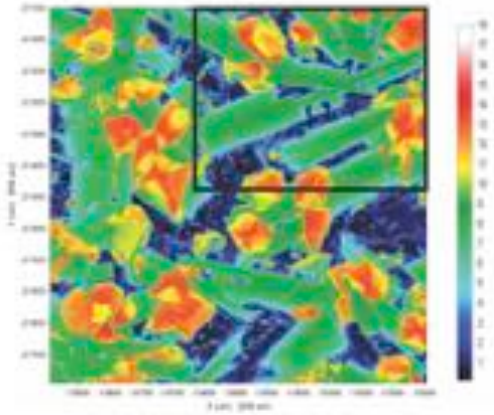


10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.% 10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt.%

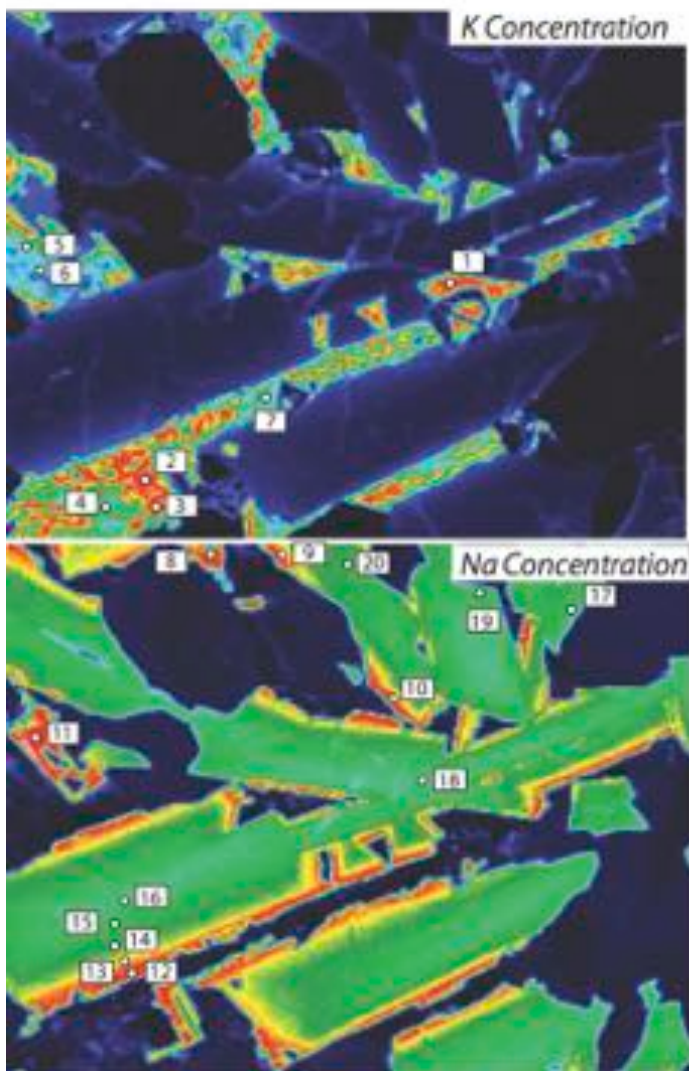


P84707 Spot analysis maps

10 element calibration 3-17-17_P84707 R1_01328_ Elemental Wt%
Ca Wt%



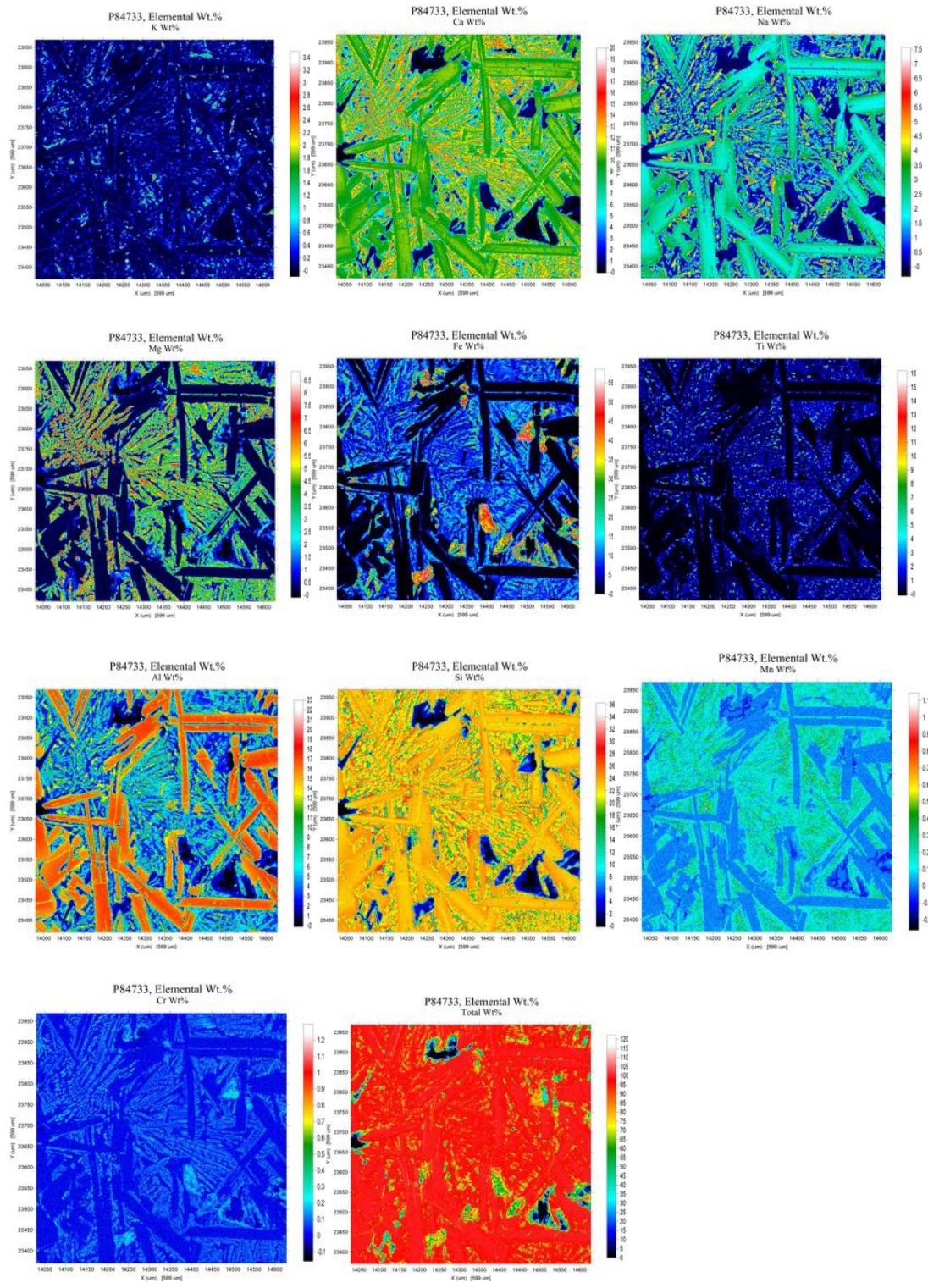
- (a) Spots 1 to 7: Late interstitial high K phase - clays or zeolite
- (b) Spots 8 to 12: High Na, moderate K rims on plagioclase - anorthoclase?
- (c) Spots 13 to 20: Miscellaneous cores and rims of plagioclase laths



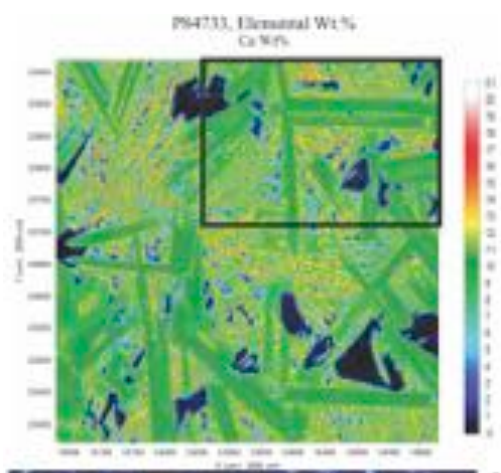
P84707 Spot analyses

Spot	SiO2	TiO2	Al2O3	FeOT	MnO	MgO	CaO	Na2O	K2O	Cr2O3	Total	K/Ca (atom)
P84707_001	45.54	0.33	6.70	27.34	0.02	2.55	1.49	0.81	3.59	0.00	88.35	2.874
P84707_002	44.77	0.28	6.56	28.54	0.09	2.65	1.45	0.78	4.02	0.03	89.17	3.296
P84707_003	46.04	0.39	7.20	27.61	0.00	2.93	0.77	0.87	3.57	-0.01	89.37	5.541
P84707_004	69.83	0.48	14.94	2.06	0.06	-0.01	0.61	0.58	1.42	-0.01	89.97	2.748
P84707_005	71.37	0.62	14.85	2.08	0.02	-0.01	0.66	0.47	0.95	-0.01	90.99	1.723
P84707_006	67.37	0.58	14.32	3.28	0.03	0.01	2.12	0.25	0.76	-0.01	88.70	0.426
P84707_007	46.84	0.18	8.80	21.90	0.00	4.47	1.23	0.91	2.36	0.00	86.69	2.281
P84707_008	68.50	0.46	14.38	2.14	0.02	0.01	0.62	0.19	0.69	0.00	87.02	1.329
P84707_009	60.03	0.17	23.33	0.64	0.01	0.03	5.43	8.22	0.54	0.01	98.39	0.118
P84707_010	59.31	0.05	24.19	0.63	0.01	0.04	6.49	7.76	0.46	-0.04	98.89	0.084
P84707_011	63.06	0.08	22.88	0.66	0.00	0.01	4.36	8.81	0.58	0.00	100.43	0.157
P84707_012	62.49	0.06	22.39	0.77	0.00	0.02	4.09	8.76	0.87	0.00	99.44	0.252
P84707_013	56.58	0.11	25.64	0.74	0.02	0.07	8.67	6.46	0.29	0.00	98.57	0.040
P84707_014	53.34	0.06	27.21	0.70	0.01	0.13	10.18	5.45	0.21	-0.01	97.26	0.024
P84707_015	52.76	0.11	28.39	0.72	-0.01	0.19	11.74	4.74	0.15	0.00	98.78	0.015
P84707_016	51.07	0.03	28.71	1.46	-0.01	0.31	12.26	4.00	0.20	0.01	98.04	0.019
P84707_017	52.22	0.10	28.50	0.74	-0.01	0.20	11.88	4.63	0.15	0.03	98.43	0.015
P84707_018	51.55	0.11	28.63	0.85	-0.01	0.13	12.10	4.40	0.18	0.00	97.95	0.018
P84707_019	52.23	0.03	28.72	0.56	0.01	0.20	11.79	4.62	0.11	-0.02	98.27	0.011
P84707_020	52.95	0.06	28.10	0.81	-0.01	0.19	11.29	4.85	0.16	-0.01	98.40	0.017

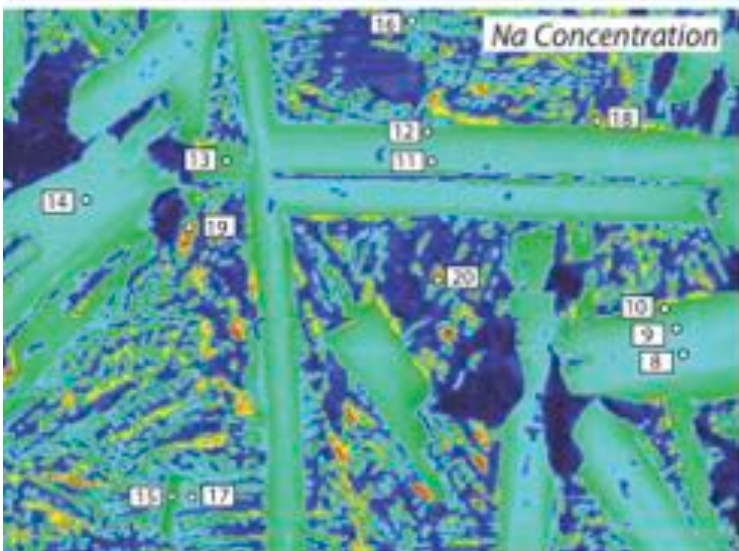
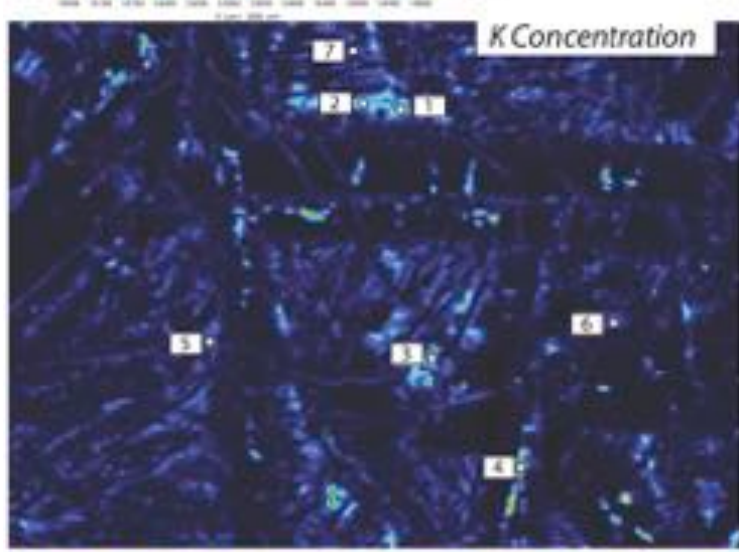
P84733 Element maps



P84733 spot analysis maps



- (a) Spots 1 to 4: Late high K phase - anorthoclase?
- (b) Spots 5 to 7: Interstitial low K feldspar between cpx lattice
- (c) Spots 8 to 15: cores and rims of larger euhedral plagioclase crystals. Want to look at zonation and range of compositions
- (d) Spots 17 to 20: moderate to high Na late phase - anorthoclase and possible zoisites

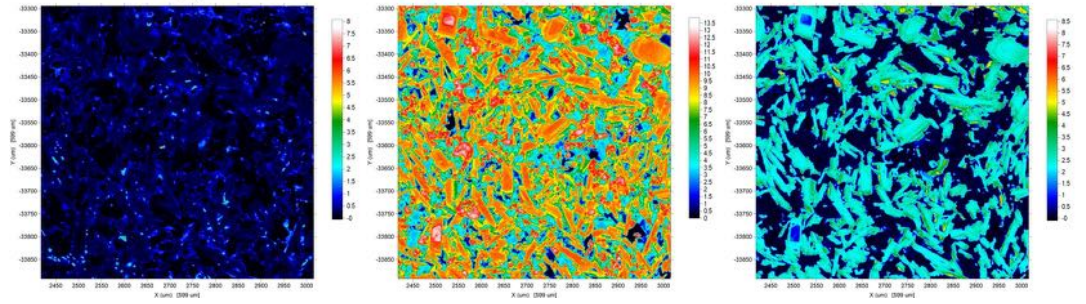


P84733 Spot analyses

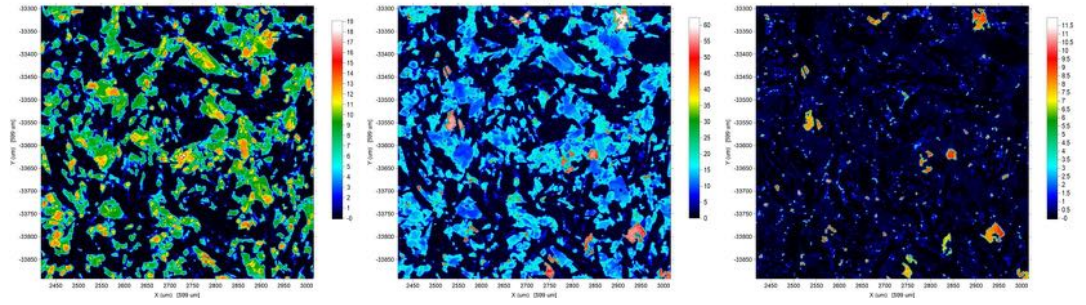
Spot	SiO2	TiO2	Al2O3	FeOT	MnO	MgO	CaO	Na2O	K2O	Cr2O3	Total	K/Ca (atom)
P84733_001	38.84	0.14	8.61	12.87	0.01	4.09	0.69	1.42	2.03	0.01	68.71	3.527
P84733_001	39.60	0.12	9.03	12.93	0.02	4.27	0.69	1.54	2.06	0.00	70.25	3.576
P84733_002	45.56	0.15	10.52	11.88	0.00	3.56	0.37	1.63	1.63	0.02	75.31	5.233
P84733_003	32.80	0.58	8.80	8.06	0.17	1.36	6.17	5.50	0.93	0.00	64.37	0.179
P84733_004	36.71	0.05	21.99	2.59	0.00	0.55	11.85	2.74	1.24	0.04	77.77	0.124
P84733_004	35.56	0.05	21.20	2.76	0.01	0.56	11.52	2.70	1.40	0.00	75.75	0.145
P84733_005	45.23	2.06	5.10	13.35	0.33	11.83	18.36	0.42	0.01	0.32	97.01	0.001
P84733_006	52.13	0.71	14.29	5.77	0.09	1.45	8.78	4.08	0.78	-0.01	88.09	0.106
P84733_007	55.09	0.41	20.70	2.97	0.07	1.87	10.40	5.07	0.13	0.01	96.72	0.015
P84733_008	48.06	0.01	32.01	0.40	0.00	0.29	15.66	2.41	0.02	0.00	98.85	0.001
P84733_009	49.91	0.05	30.66	0.60	0.00	0.32	14.47	3.16	0.06	0.00	99.24	0.005
P84733_010	52.31	1.15	11.85	12.76	0.28	4.85	13.30	3.06	0.04	0.00	99.60	0.004
P84733_011	49.29	0.07	31.10	0.62	0.00	0.35	14.89	2.85	0.03	0.02	99.21	0.002
P84733_012	48.33	0.85	10.97	10.04	0.21	5.43	14.35	3.10	0.09	0.00	93.38	0.007
P84733_012	48.01	0.74	11.25	9.27	0.21	5.31	14.26	3.38	0.10	0.04	92.56	0.009
P84733_013	51.14	0.07	29.51	0.78	0.03	0.36	13.62	3.74	0.04	0.00	99.29	0.003
P84733_014	48.64	0.04	31.61	0.43	0.02	0.29	15.29	2.75	0.02	0.00	99.08	0.001
P84733_015	52.97	0.22	26.20	1.54	0.01	1.02	12.15	4.70	0.04	0.04	98.89	0.004
P84733_016	50.20	1.07	12.95	14.23	0.31	1.79	10.31	3.91	0.42	0.02	95.20	0.049
P84733_017	50.27	1.26	10.07	9.31	0.24	8.39	16.11	2.11	0.05	0.09	97.89	0.003
P84733_018	47.75	1.27	10.35	8.60	0.17	7.69	15.17	3.80	0.08	0.12	95.00	0.007
P84733_018	47.01	1.28	10.62	8.17	0.18	7.38	14.68	4.08	0.09	0.12	93.61	0.007
P84733_019	32.70	0.33	15.71	5.11	0.04	1.29	7.84	6.62	0.16	-0.01	69.80	0.024
P84733_020	45.49	2.29	5.42	12.23	0.25	10.11	20.82	0.44	0.00	0.32	97.37	0.000

P84761 Element maps

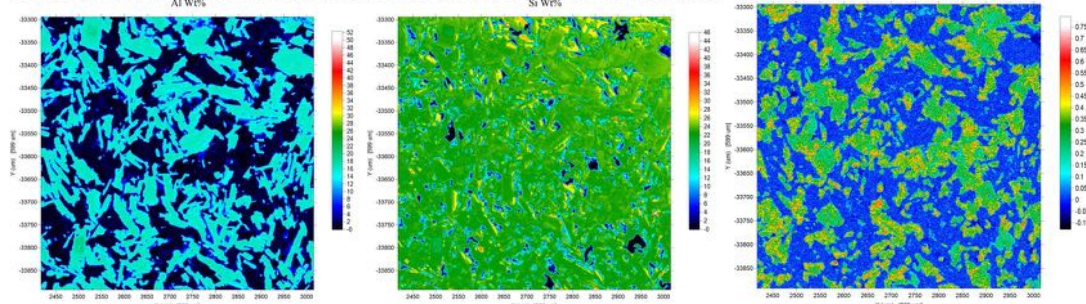
10 element calibration 3-17-17_P84761 R1_01348_ Elemental Wt.% K Wt% 10 element calibration 3-17-17_P84761 R1_01348_ Elemental Wt.% Ca Wt% 10 element calibration 3-17-17_P84761 R1_01348_ Elemental Wt.% Na Wt%



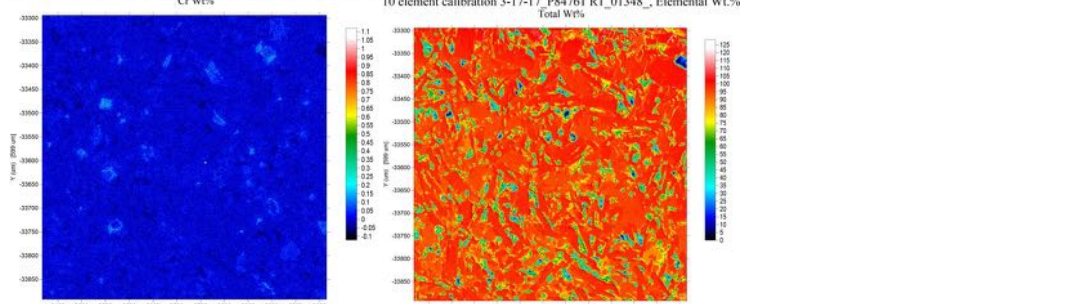
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10 element calibration 3-17-17_P84761 R1_01348_ Elemental Wt.% Al Wt% 10 element calibration 3-17-17_P84761 R1_01348_ Elemental Wt.% Si Wt% 10 element calibration 3-17-17_P84761 R1_01348_ Elemental Wt.% Mn Wt%

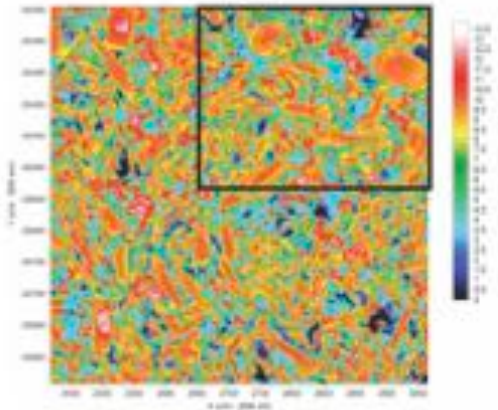


10 element calibration 3-17-17_P84761 R1_01348_ Elemental Wt.% Cr Wt% 10 element calibration 3-17-17_P84761 R1_01348_ Elemental Wt.% Total Wt%



P84761 Spot analysis maps

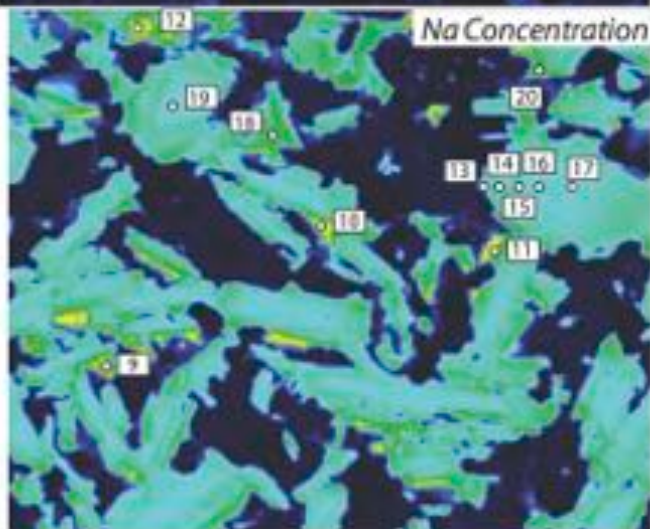
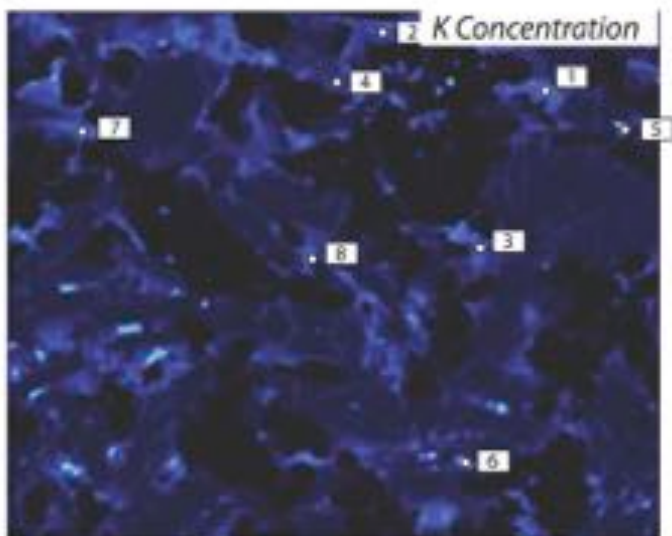
ED element calibration 3-17-17_P84761_R1_01348_Elemental Wt%
Ca Wt%



(a) Spots 1 to 8: Late interstitial high K phase - glass?

(b) Spots 9 to 12: High Na, moderate K phase - probably anorthoclase

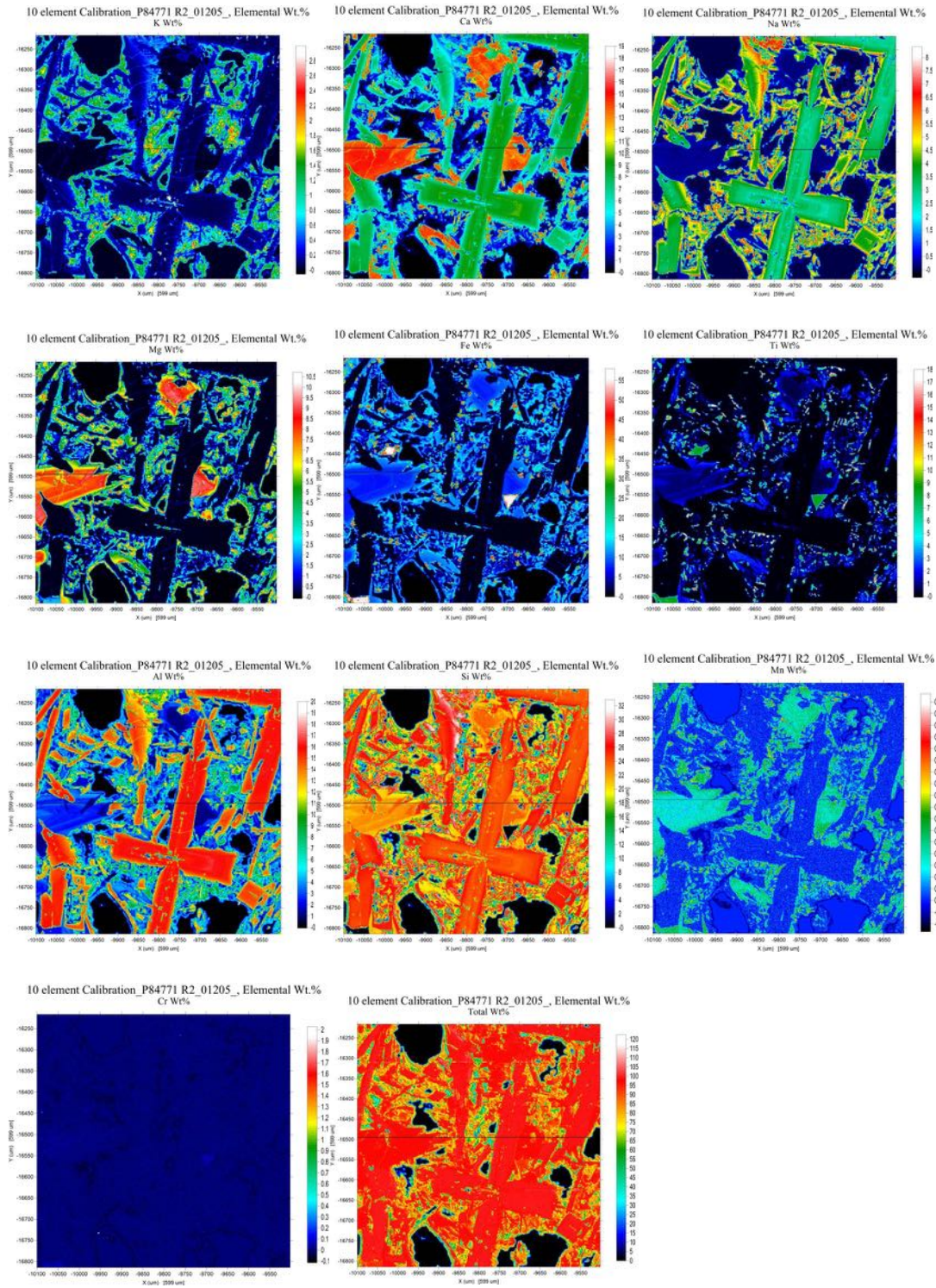
(c) Spots 13 to 20: Miscellaneous cores and rims of plagioclase laths



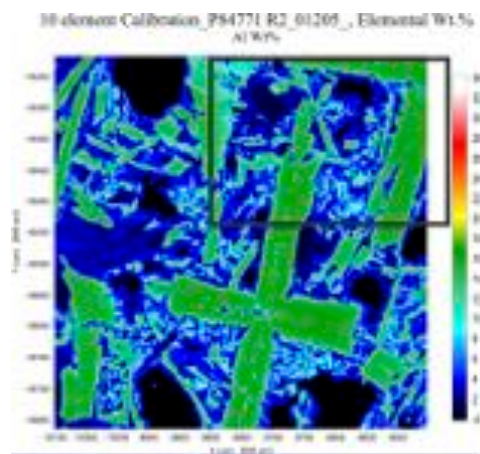
P84761 Spot analyses

Spot	SiO2	TiO2	Al2O3	FeOT	MnO	MgO	CaO	Na2O	K2O	Cr2O3	Total	K/Ca (atom)
P84761_001	49.26	1.05	8.18	13.32	0.21	5.87	4.89	0.30	1.14	-0.02	84.19	0.278
P84761_002	57.28	0.10	25.84	2.44	0.00	0.89	8.62	4.92	0.65	-0.01	100.74	0.090
P84761_003	29.85	0.52	6.49	4.01	-0.03	3.43	0.70	0.57	0.53	-0.02	46.04	0.909
P84761_004	58.53	0.20	27.41	1.13	-0.01	0.07	9.00	5.30	0.44	0.00	102.08	0.059
P84761_005	44.97	0.88	16.67	6.61	0.10	0.54	8.80	2.09	0.75	0.03	81.43	0.101
P84761_006	15.25	0.38	7.43	1.67	0.00	0.31	4.12	2.85	0.26	-0.03	32.23	0.075
P84761_007	42.27	0.75	12.87	6.14	0.02	4.63	4.40	3.63	0.93	-0.02	75.62	0.253
P84761_008	27.54	0.91	6.49	8.14	0.03	8.60	2.93	0.80	1.21	0.01	56.66	0.494
P84761_009	57.89	0.08	32.05	1.37	0.01	0.03	12.65	2.30	0.26	0.02	106.66	0.025
P84761_010	61.05	0.06	28.61	1.19	0.00	0.13	9.45	3.73	0.55	-0.01	104.76	0.070
P84761_011	43.58	0.05	19.79	0.96	0.02	0.13	8.72	7.15	0.53	-0.02	80.91	0.073
P84761_012	48.09	0.01	28.90	1.44	0.00	0.13	13.33	3.97	0.20	0.02	96.09	0.018
P84761_013	51.31	0.04	29.85	1.43	0.02	0.16	13.27	3.67	0.21	0.00	99.98	0.019
P84761_014	51.39	0.03	30.49	1.54	0.04	0.17	13.89	3.09	0.24	0.00	100.89	0.021
P84761_015	49.76	0.00	30.84	1.59	0.02	0.14	14.14	3.12	0.17	0.01	99.81	0.014
P84761_016	50.39	0.04	30.39	1.41	0.01	0.18	13.79	3.27	0.19	0.03	99.71	0.016
P84761_017	50.60	0.13	30.01	1.44	0.02	0.17	13.53	3.47	0.20	0.01	99.59	0.018
P84761_018	53.38	0.07	24.50	0.93	-0.01	0.09	9.03	6.46	0.53	0.01	94.98	0.070
P84761_019	49.96	0.07	30.34	1.33	0.02	0.18	13.95	3.42	0.18	0.03	99.47	0.015
P84761_020	54.26	0.08	28.36	1.28	0.02	0.14	11.75	4.69	0.32	-0.01	100.89	0.033

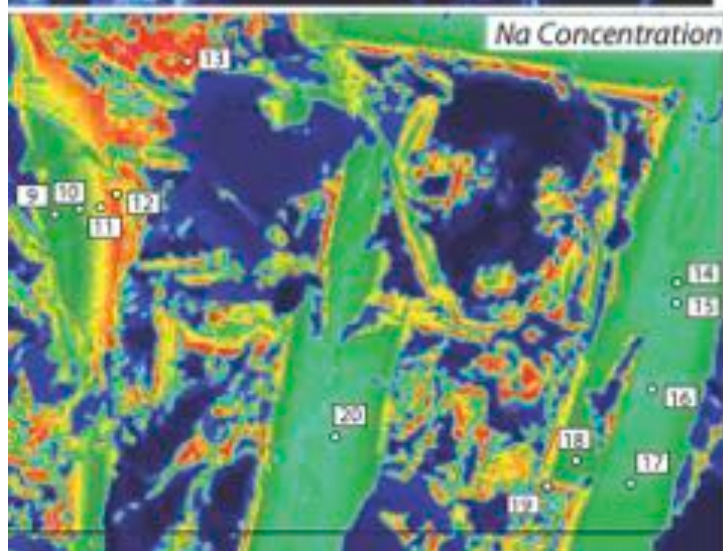
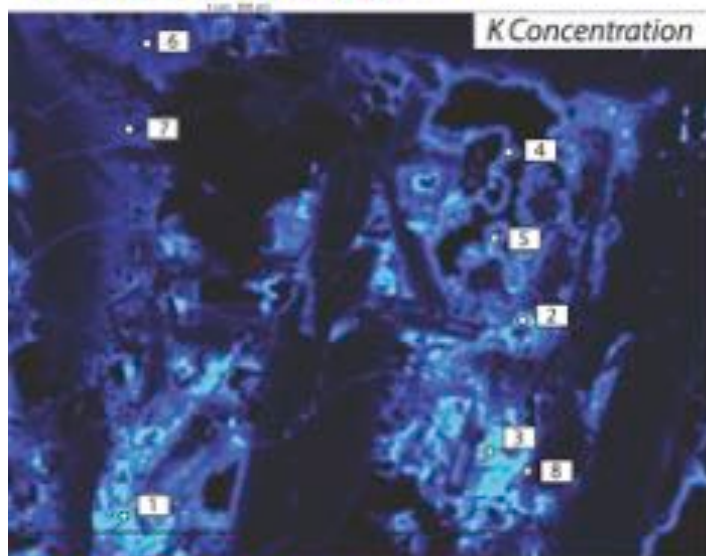
P84771 Element maps



P84771 Spot analysis maps



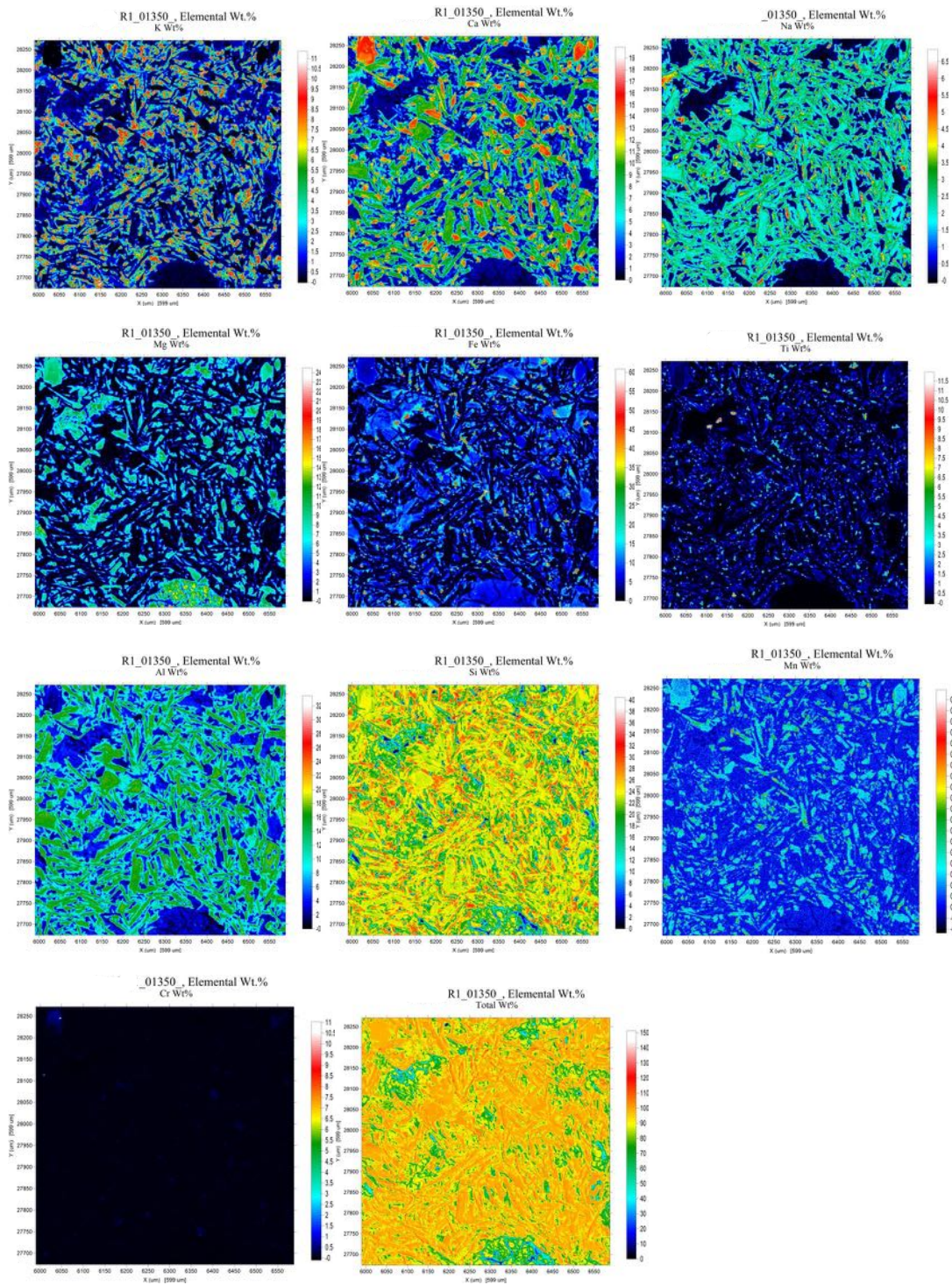
- (a) Spots 1 to 3: Interstitial high K and Mg phase - clay?
- (b) Spots 4 to 5: High K zeolite or clay lining vesicles
- (c) Spots 6 to 8: Mod K, high Na rims of larger euhedral plagioclase crystals. Anorthoclase?
- (d) Spots 9 to 20: Various portions of large zoned plagioclase with highly sodic (anorthoclase?) rims



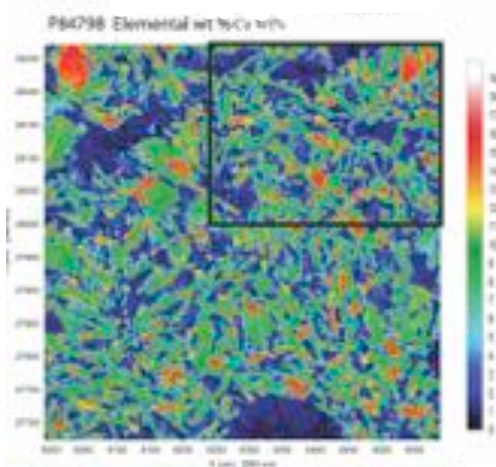
P84771 Spot analyses

Spot	SiO2	TiO2	Al2O3	FeOT	MnO	MgO	CaO	Na2O	K2O	Cr2O3	Total	K/Ca (atom)
P84771_001	39.52	1.84	5.62	16.11	0.02	6.03	2.98	0.30	2.17	-0.01	74.58	0.868
P84771_002	45.44	0.41	7.25	19.77	0.04	9.78	1.70	0.52	1.85	-0.01	86.75	1.296
P84771_003	57.32	0.63	15.94	2.33	0.01	0.16	2.77	5.45	1.18	0.01	85.78	0.509
P84771_004	40.65	0.24	6.52	15.73	0.01	12.16	1.40	0.23	1.45	-0.01	78.36	1.234
P84771_005	45.94	0.28	7.49	14.75	0.00	9.54	1.06	0.17	1.26	0.03	80.52	1.422
P84771_006	62.37	0.09	20.95	0.85	0.00	0.06	3.78	6.44	0.81	-0.01	95.33	0.256
P84771_007	62.85	0.12	20.48	0.82	0.02	0.04	6.09	4.88	0.67	0.01	95.97	0.131
P84771_008	57.59	0.54	19.59	1.64	0.01	0.76	3.81	9.04	0.54	0.01	93.54	0.169
P84771_009	52.14	0.10	27.97	0.98	0.01	0.14	11.38	4.85	0.11	0.02	97.70	0.011
P84771_010	53.55	0.14	26.86	1.21	0.02	0.15	10.33	5.59	0.13	-0.03	97.94	0.015
P84771_011	57.30	0.19	25.21	0.92	0.00	0.09	8.06	6.73	0.23	0.00	98.73	0.034
P84771_012	66.43	0.10	22.72	0.74	0.00	0.03	3.84	6.25	0.55	-0.01	100.65	0.171
P84771_013	62.19	0.15	20.78	0.73	0.00	0.03	5.27	7.10	0.63	0.00	96.87	0.142
P84771_014	50.91	0.04	29.09	0.81	0.03	0.13	12.83	4.07	0.07	0.00	97.98	0.007
P84771_015	50.04	0.07	29.83	0.76	0.00	0.12	13.49	3.67	0.06	0.00	98.05	0.005
P84771_016	49.71	0.07	29.97	0.85	0.00	0.13	13.63	3.57	0.05	0.00	97.98	0.004
P84771_017	51.05	0.06	28.88	0.84	0.00	0.13	12.51	4.19	0.08	0.02	97.79	0.007
P84771_017	51.42	0.12	29.18	0.74	0.01	0.13	12.48	4.29	0.07	0.01	98.44	0.007
P84771_018	52.24	0.18	28.40	0.88	0.02	0.13	11.69	4.67	0.11	0.00	98.32	0.011
P84771_019	59.10	0.14	23.91	0.94	0.05	0.07	6.67	7.04	0.26	0.01	98.18	0.046
P84771_020	50.94	0.06	29.28	0.82	0.02	0.12	12.82	4.11	0.07	-0.01	98.23	0.006

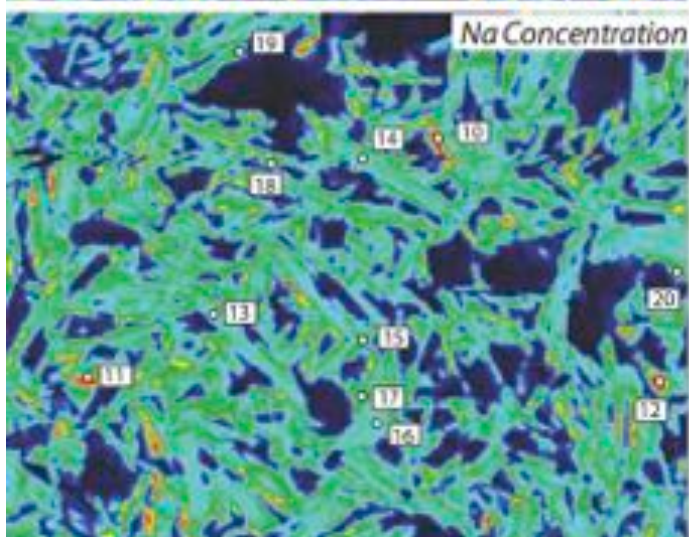
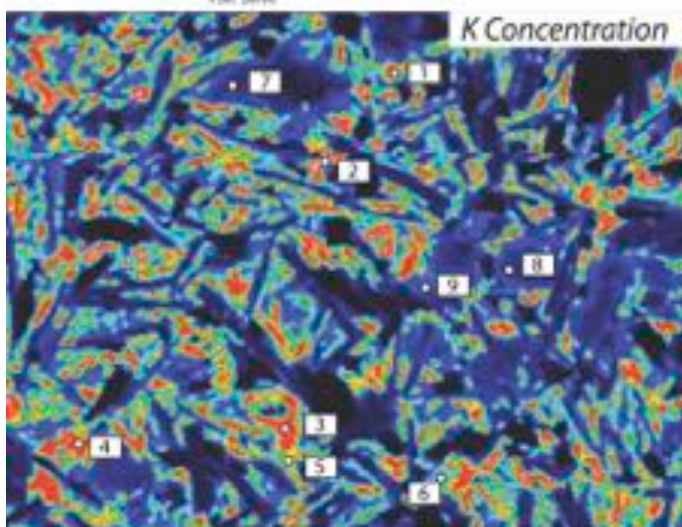
P84798 Element maps



P84798 Spot analysis maps



- (a) Spots 1 to 6: Late interstitial high K phase - clays?
- (b) Spots 7 to 9: Moderate K, interstitial glass?
- (c) Spots 10 to 12: High Na, moderate K rims on plagioclase laths (anorthoclase?)
- (d) Spots 13 to 20: Miscellaneous cores and rims of small plagioclase laths



P84798 Spot analyses

Spot	SiO2	TiO2	Al2O3	FeOT	MnO	MgO	CaO	Na2O	K2O	Cr2O3	Total	K/Ca (atom)
P84798_001	47.37	0.12	8.28	15.96	0.01	3.57	1.99	0.03	2.63	-0.02	79.94	1.577
P84798_002	46.33	-0.02	7.34	9.51	0.00	10.35	1.83	0.15	0.97	-0.03	76.43	0.630
P84798_003	17.43	14.87	3.47	48.50	0.56	4.58	2.37	0.38	0.54	0.03	92.72	0.271
P84798_004	42.67	0.23	6.60	15.25	0.05	9.85	1.93	0.13	1.43	0.02	78.16	0.880
P84798_005	65.72	0.21	18.60	1.11	0.00	0.41	3.54	2.06	8.99	-0.01	100.62	3.027
P84798_006	33.66	2.38	7.83	15.37	0.15	4.15	3.60	0.25	5.03	-0.01	72.40	1.661
P84798_007	5.29	-0.05	0.53	10.71	0.04	18.78	1.81	0.26	0.73	-0.03	38.06	0.481
P84798_008	44.34	0.07	16.41	5.61	0.00	5.23	7.47	0.62	1.15	-0.01	80.89	0.184
P84798_009	45.23	0.10	7.25	11.31	0.01	14.39	1.64	0.36	1.22	0.02	81.53	0.883
P84798_010	59.94	0.16	22.81	0.79	-0.01	0.19	4.90	5.96	3.05	0.00	97.77	0.742
P84798_011	43.24	1.92	16.41	9.84	0.14	1.49	5.33	3.05	2.29	-0.01	83.69	0.513
P84798_012	53.10	0.57	19.07	3.95	0.04	3.11	5.74	3.35	1.79	-0.01	90.71	0.370
P84798_013	49.01	0.07	30.53	1.00	0.02	0.26	14.35	2.95	0.48	-0.02	98.66	0.040
P84798_014	49.37	0.14	27.96	1.81	0.05	1.36	14.75	2.52	0.39	-0.02	98.33	0.032
P84798_015	51.43	0.02	28.65	1.10	0.03	0.18	12.10	3.70	0.94	0.02	98.17	0.093
P84798_016	49.17	0.01	29.44	1.34	-0.01	0.71	13.78	2.55	0.56	0.02	97.57	0.048
P84798_017	45.30	2.53	8.57	19.54	0.39	7.04	10.22	1.24	2.28	0.01	97.13	0.265
P84798_018	55.31	0.10	25.56	0.92	0.01	0.22	8.51	5.90	1.95	-0.02	98.45	0.273
P84798_019	56.23	0.22	25.02	1.07	0.01	0.19	8.26	4.72	2.92	-0.01	98.63	0.421
P84798_020	35.23	0.32	13.94	1.64	0.01	1.06	5.37	2.20	4.19	0.00	63.97	0.929