

**Table S1.** Cell parameters obtained from XRPD using the Rietveld method.

Sample	<i>R factors</i>				Direct cell parameters (standard deviations are given in parentheses)							Reciprocal cell parameters							
	$R_{vp}$	$R_p$	$\chi^2$	$Rr^2$	$a$	$b$	$c$	$\alpha$	$\beta$	$\gamma$	$V$	$a^*$	$b^*$	$c^*$	$\alpha^*$	$\beta^*$	$\gamma^*$	$V^*$	
Sanadine	FHS-1	15.9	12.4	3.75	14.1	8.5123(24)	13.0072(23)	7.1814(12)	90.000(0)	116.111(5)	90.000(0)	713.986(358)	0.1308	0.07688	0.1551	90.000	63.889	90.000	0.001401
Orthoclase	CHG-2	13.6	10.6	2.41	10.7	8.5819(36)	12.9925(54)	7.2119(30)	90.000(0)	116.038(6)	90.000(0)	722.516(805)	0.1297	0.07697	0.1543	90.000	63.962	90.000	0.001384
	CHG-12	13.3	10.5	2.22	8.97	8.5710(22)	13.0052(34)	7.2067(19)	90.000(0)	116.034(3)	90.000(0)	721.807(511)	0.1298	0.07689	0.1544	90.000	63.966	90.000	0.001385
	CSY-1	12.0	9.4	1.78	8.47	8.5884(29)	13.0005(45)	7.2101(25)	90.000(0)	116.063(4)	90.000(0)	723.164(672)	0.1296	0.07692	0.1544	90.000	63.937	90.000	0.001382
	CSY-2	13.5	10.7	2.35	9.59	8.5729(19)	12.9997(29)	7.2030(16)	90.000(0)	116.049(4)	90.000(0)	721.195(423)	0.1298	0.07693	0.1545	90.000	63.951	90.000	0.001387
	CSY-3	12.3	9.6	1.90	7.43	8.5774(23)	12.9858(36)	7.2078(20)	90.000(0)	116.038(4)	90.000(0)	721.357(540)	0.1298	0.07701	0.1544	90.000	63.962	90.000	0.001386
Microcline	LS-1	14.7	11.5	2.77	11.2	8.5723(32)	12.9481(47)	7.2057(26)	90.291(8)	115.958(8)	88.884(10)	718.968(709)	0.1298	0.07725	0.1544	90.220	64.042	91.100	0.001391
	LS-2	13.6	10.4	2.26	7.67	8.5720(38)	12.9736(60)	7.2099(31)	90.458(10)	115.984(5)	88.501(14)	720.507(864)	0.1298	0.07711	0.1543	90.221	64.019	91.444	0.001388
	SX-1	17.1	13.2	3.86	12.2	8.5596(43)	12.9493(67)	7.1992(34)	90.395(16)	115.998(9)	89.089(20)	717.131(939)	0.1300	0.07723	0.1545	90.005	64.005	90.821	0.001394
	TG-3	14.3	11.3	2.69	12.2	8.5795(24)	12.9774(36)	7.2036(20)	90.049(7)	116.048(6)	89.689(8)	720.571(537)	0.1297	0.07706	0.1545	90.097	63.952	90.322	0.001388
	TG-4	14.2	11.0	2.62	12.2	8.5959(24)	12.9960(36)	7.2167(20)	90.012(5)	116.038(5)	89.722(7)	724.364(542)	0.1295	0.07695	0.1542	90.122	63.962	90.304	0.001381