

Table 1 Vesicle measurements. Values in parentheses are average of four images. Gm denotes groundmass, d equivalent diameter and D deformation parameter
CI fallout pumice

Sample	Nu mber measure d	Gm vesicularity range ^a	Bulk vesicularity range ^b	Coa lesced vesi cles ^a	Gm vesicle number density range ^a (cm ⁻²)	d average ^a (μ m)	D average ^a
LFU							
CI60- 70m1	1960	0.81- 0.87 (0.83)	0.86- 0.91 (0.88)	(0.76)	222460-333060 (273310)	10.8	0.407
CI60- 70m2	1206	0.86- 0.90 (0.87)	0.91- 0.94 (0.92)	(0.82)	139830-228180 (191630)	15.0	0.383
CI60- 70t	593	0.81- 0.86 (0.84)	0.89- 0.92 (0.90)	(0.84)	134750-242170 (188460)	16.0	0.630
all	3759	0.81- 0.90 (0.85)	0.86- 0.94 (0.90)	(0.81)	134750-333060 (217800)	10.8- 16.0 (13.9)	0.383-0.630 (0.473)
UFU							
CI110- 120m1	1051	0.68- 0.84 (0.78)	0.85- 0.89 (0.87)	(0.71)	178600-323690 (253230)	12.4	0.370
CI110- 120m2	1682	0.80- 0.86 (0.83)	0.86- 0.90 (0.88)	(0.75)	294290-375010 (356360)	11.8	0.402
CI110- 120t	1589	0.82- 0.90 (0.86)	0.87- 0.91 (0.89)	(0.77)	188450-284120 (256220)	13.3	0.551
all	4322	0.68- 0.90 (0.82)	0.85- 0.91 (0.88)	(0.74)	178600-375010 (288603)	11.8- 13.3 (12.5)	0.370-0.551 (0.441)
oriented samples							
120- 130t1 \perp	1747	0.75	nm	0.64	179470	15.9	0.285
120- 130t2 \perp	2533	0.68	nm	0.49	260220	14.4	0.492
120- 130t2//	461	0.69	nm	0.50	47350	32.5	0.561
120- 130t3 \perp	3607	0.60	nm	0.44	370550	10.1	0.273
<i>AMS1 fallout layers B1 and D1</i>							

Sample	Nu mber measure d	Gm vesicularity range ^a	Bulk vesicularity range ^b	Coa lesced vesi cles ^a	Gm vesicle number density range ^a (cm ⁻²)	d average ^a (μ m)	D average ^a
B1							
FL3C1		0.79-	0.82-		361660-453190	10.1	0.370
	2520	0.83 (0.81)	0.85 (0.83)	(0.79)	(400435)		
FL3C2		0.69-	0.80-		328610-579050	8.4	0.370
	3001	0.81 (0.75)	0.88 (0.84)	(0.72)	(477347)		
FL1A//		0.41-	0.51-		556800-1169230	6.2	0.343
	5887	0.59 (0.53)	0.65 (0.60)	(0.42)	(754646)		
FL1B \perp		0.43-	0.63-		1111160-1422270	4.5	0.235
	7863	0.51 (0.46)	0.67 (0.64)	(0.39)	(1264160)		
FL1C//		0.51-	0.62-		636610-921500	6.7	0.440
	3706	0.59 (0.55)	0.69 (0.65)	(0.49)	(791286)		
all		0.41-	0.51-		328610-1422270	4.5-	0.235-0.440
	22977	0.83 (0.62)	0.88 (0.71)	(0.60)	(737575)	10.1 (7.2)	(0.352)
D1							
FLD1C		0.75-	0.83-		477840-805330	8.5	0.440
	4615	0.84 (0.79)	0.88 (0.84)	(0.76)	(587280)		
FLTE//		0.76-	0.85-		291290-621637	9.6	0.433
	1871	0.85 (0.82)	0.91 (0.89)	(0.81)	(402025)		
FLGE		0.56-	0.82-		275250-718880	6.7	0.316
	3431	0.69 (0.62)	0.87 (0.85)	(0.57)	(436158)		
all		0.56-	0.82-		275250-805330	6.7-	0.316-0.440
	9917	0.85 (0.74)	0.91 (0.86)	(0.71)	(475154)	9.6 (8.3)	(0.400)

a vesicles < 200 μ m

b including vesicles > 200 μ m (pheno-free)

// cut along maximum vesicle elongation

\perp cut perpendicular to maximum vesicle elongation

nm=non measured