

Volcanic ash from the first 24 hours of the 2011 Grimsvötn eruption:

Cumulative grain size distribution and surface properties.

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Relative humidity at the sampling sites, during the first 24 hours, ranged from 40% to 80%. All samples were collected dry.

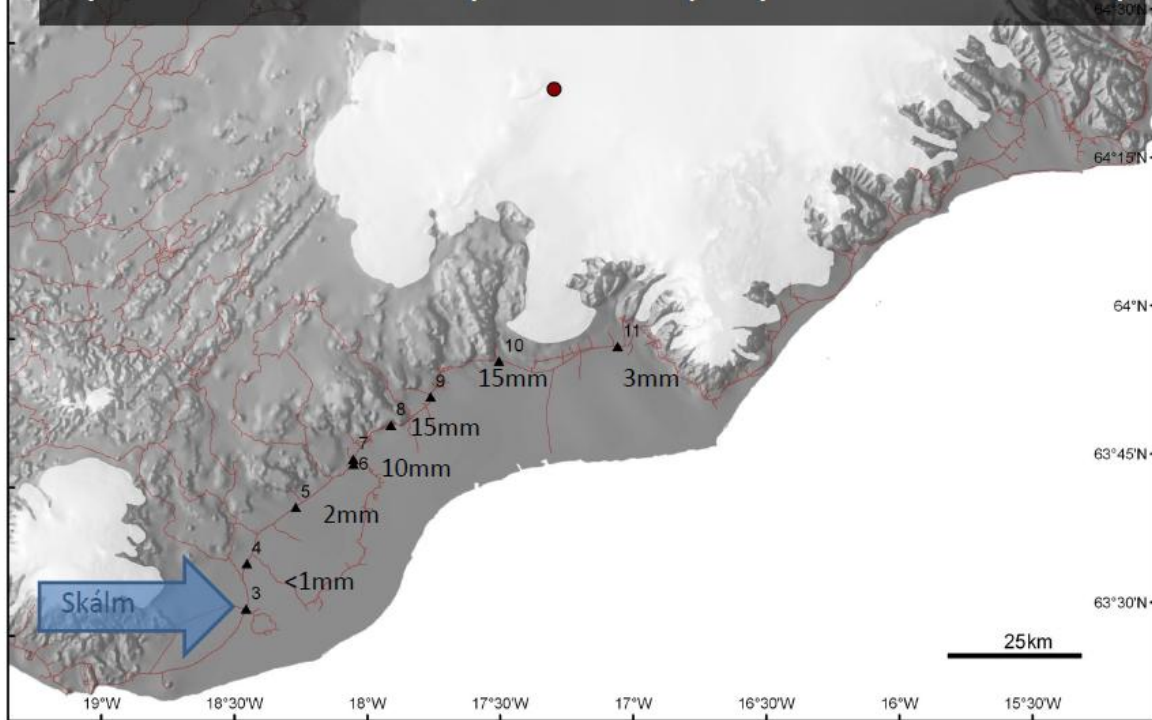
The ash was mostly basaltic glass.

Preliminary estimated hardness: 5.5-6 (Mohs scale).

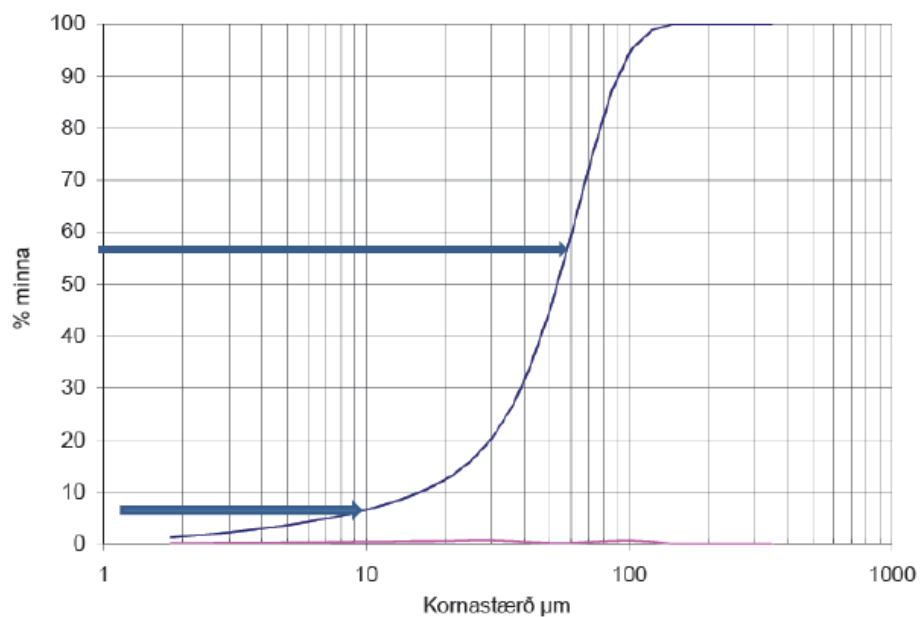
Preliminary estimated melting temperature: 1150 – 1200 °C.

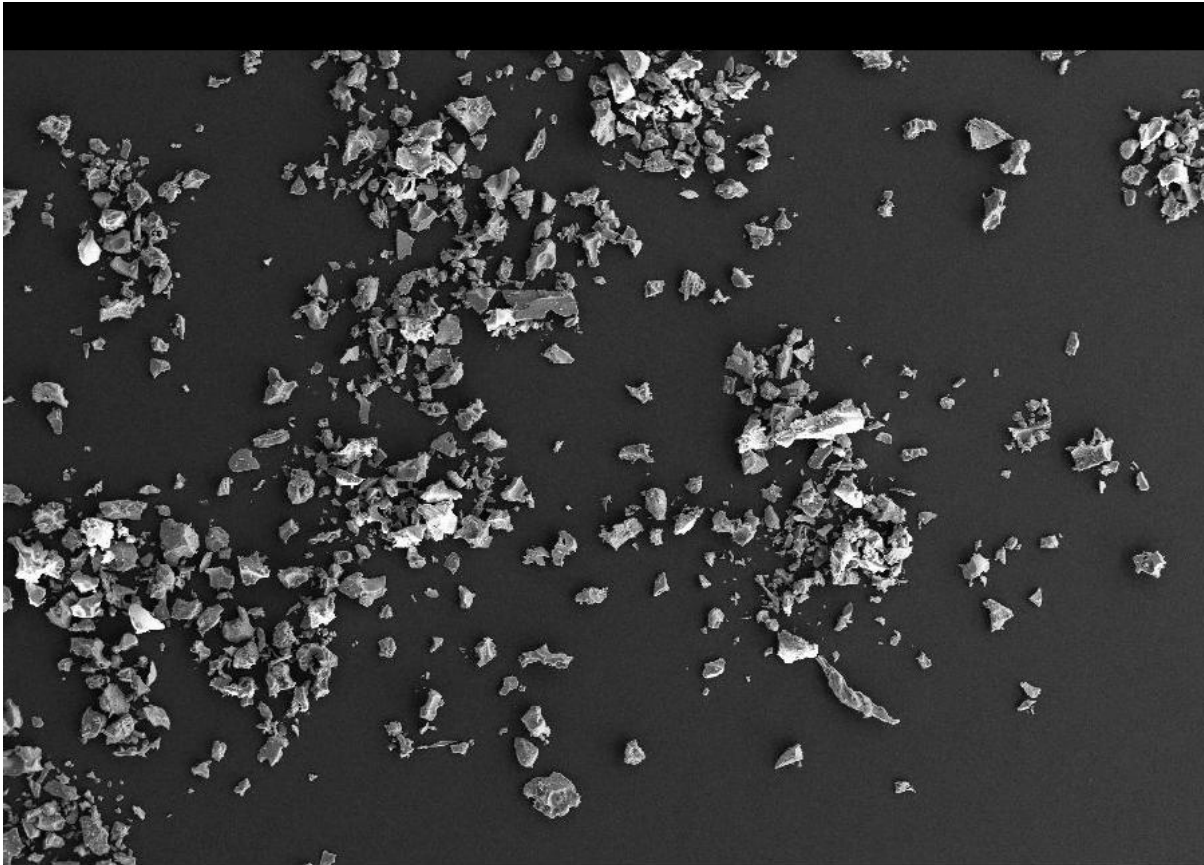
Sample nr.	Location Latitude degr.min.sec.	Location longitude degr.min.sec.	Name	Distance to eruption site km	Elevation m.a.s.l.	May-22	Ash thickness	Weather
3	63 32 43,4	18 27 05,4	Skálm on bridge	115,08	48	16:05	<1 mm	calm
4	63 37 17,6	18 26 50,0	Kúðafhljót on bridge	107,05	54	16:25	<1 mm	calm
5	63 42 55,6	18 15 32,6	Eldhraun	93,17	89	16:55	2 mm	calm
6	63 47 12,1	18 02 09,2	"Klaustur"	81,17	30	17:30	1 cm	calm
7	63 47 43,4	18 02 12,8	Klaustur on car	79,42		17:55	0,8 cm	calm
8	63 51 06,5	17 53 26,4	Foss á Síðu, hay bales	70,68	46	18:10	1 cm	calm
9	63 53 54,3	17 44 11,8	Hverfisfljót west	62,13	45	18:33	1-2 cm	calm
10	63 57 21,3	17 28 16,5	Núpsvötn west	52,47	51	18:55	1-2 cm	calm
11	63 58 30,1	17 00 49,2	Skeiðará on bridge	50,37	83	19:30	3 mm	calm

Sampling sites May 22 from 16:05 to 19:30 GMT.
Up to 24 hours of eruption time (map: Rósa Ólafsdóttir)

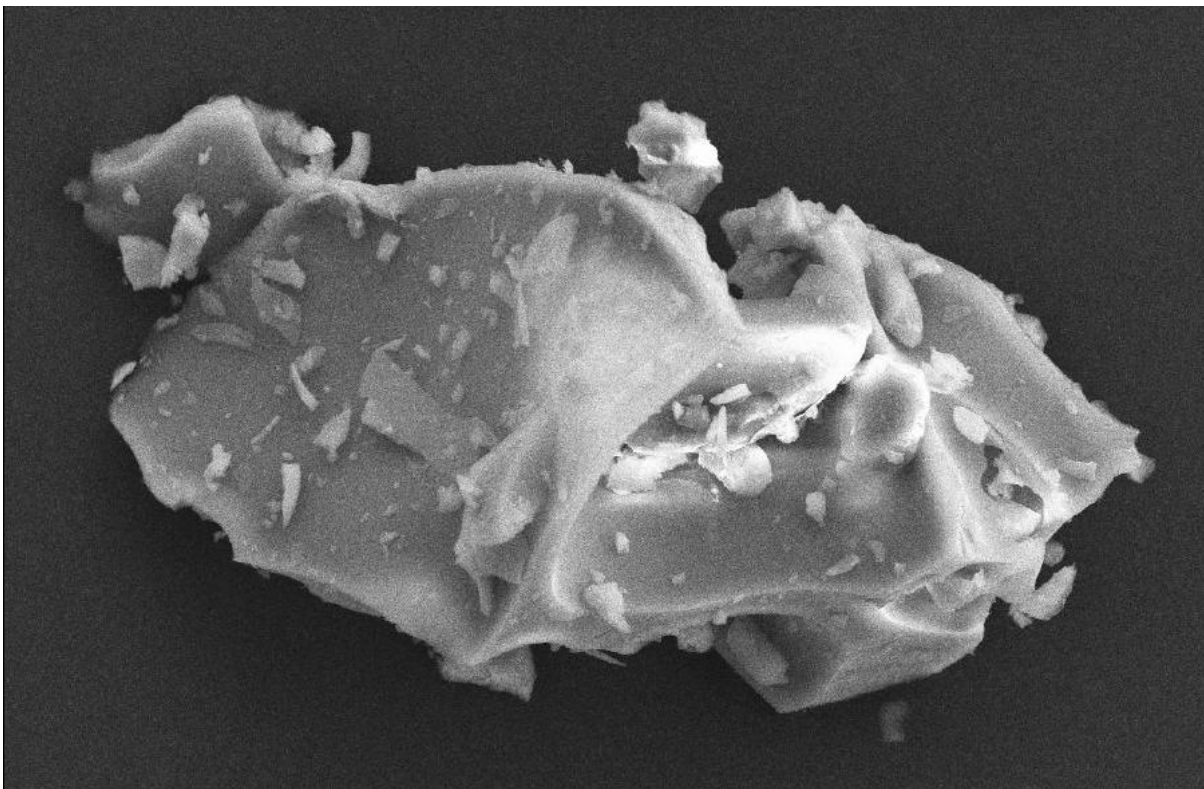


Skálm, May 22 at 16:05 GMT
115 km from the eruption site



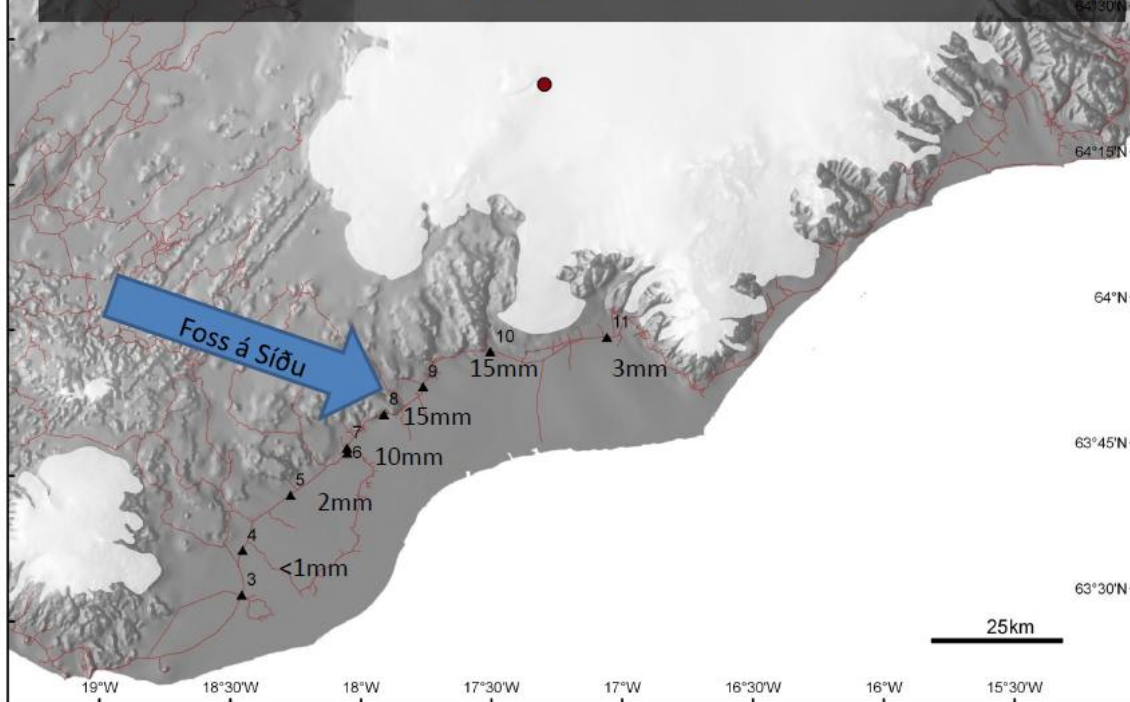


WD = 8.5 mm EHT = 20.00 kV Signal A = SE2 Date :24 May 2011
3 Skálm - 26.tif 200 μ m Mag = 100 X Innovation Center Iceland

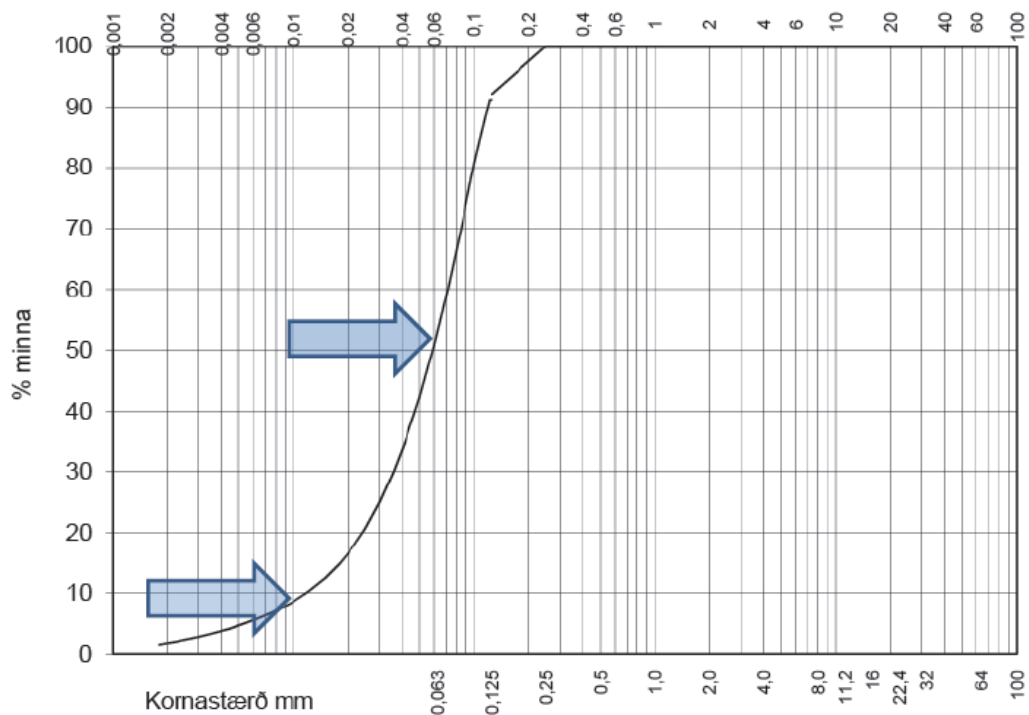


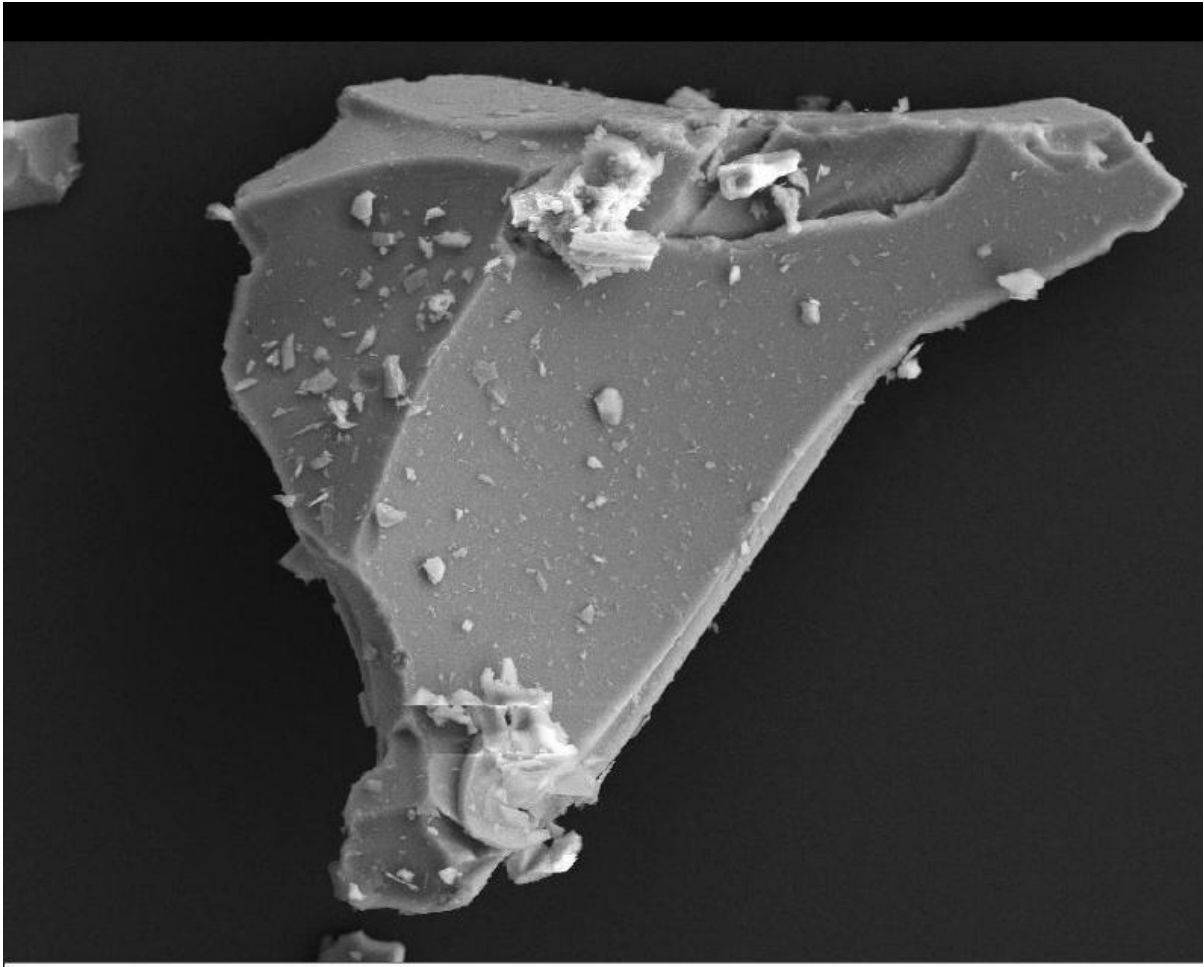
WD = 8.5 mm EHT = 20.00 kV Signal A = SE2 Date :24 May 2011
3 Skálm - 13.tif 10 μ m Mag = 2.50 K X Innovation Center Iceland


Sampling sites May 22 from 16:05 to 19:30 GMT.
Up to 24 hours of eruption time (map: Rósa Ólafsdóttir)



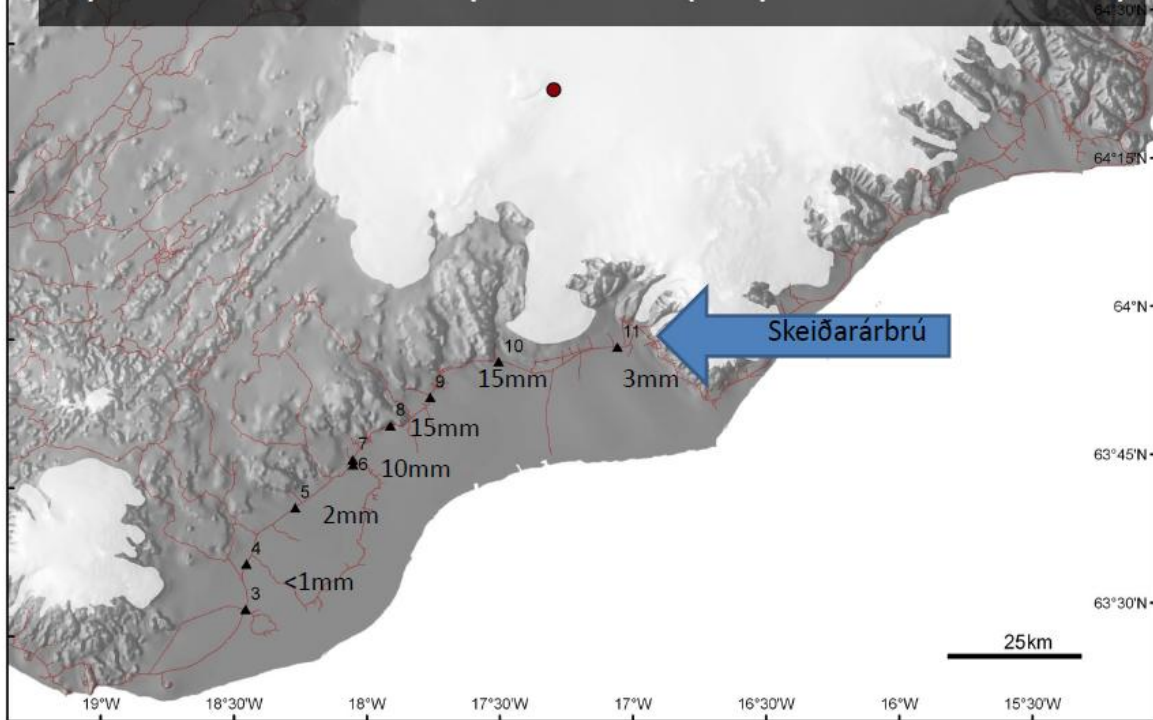
Foss á Síðu, May 22 at 18:10 GMT
71 km from the eruption site



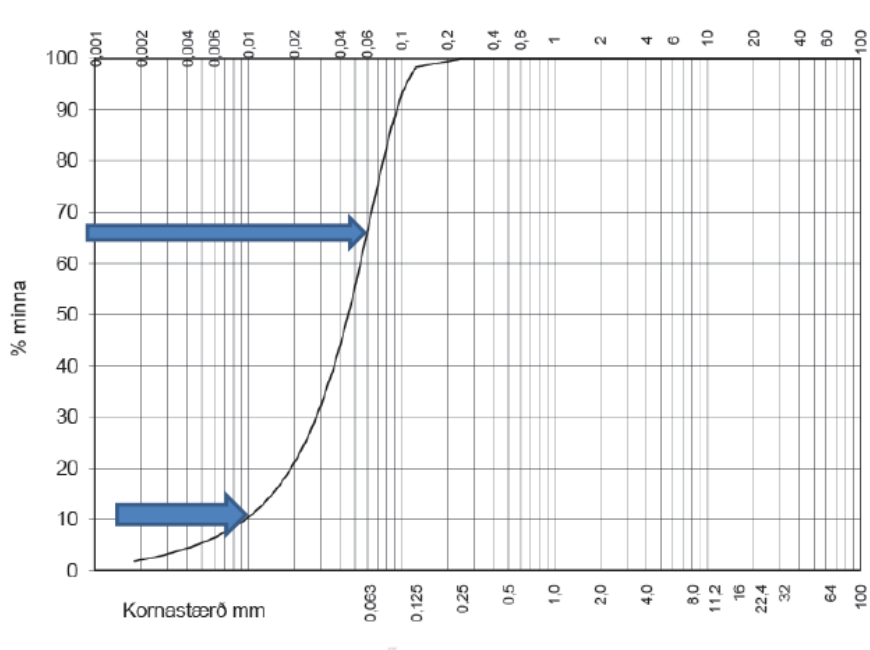


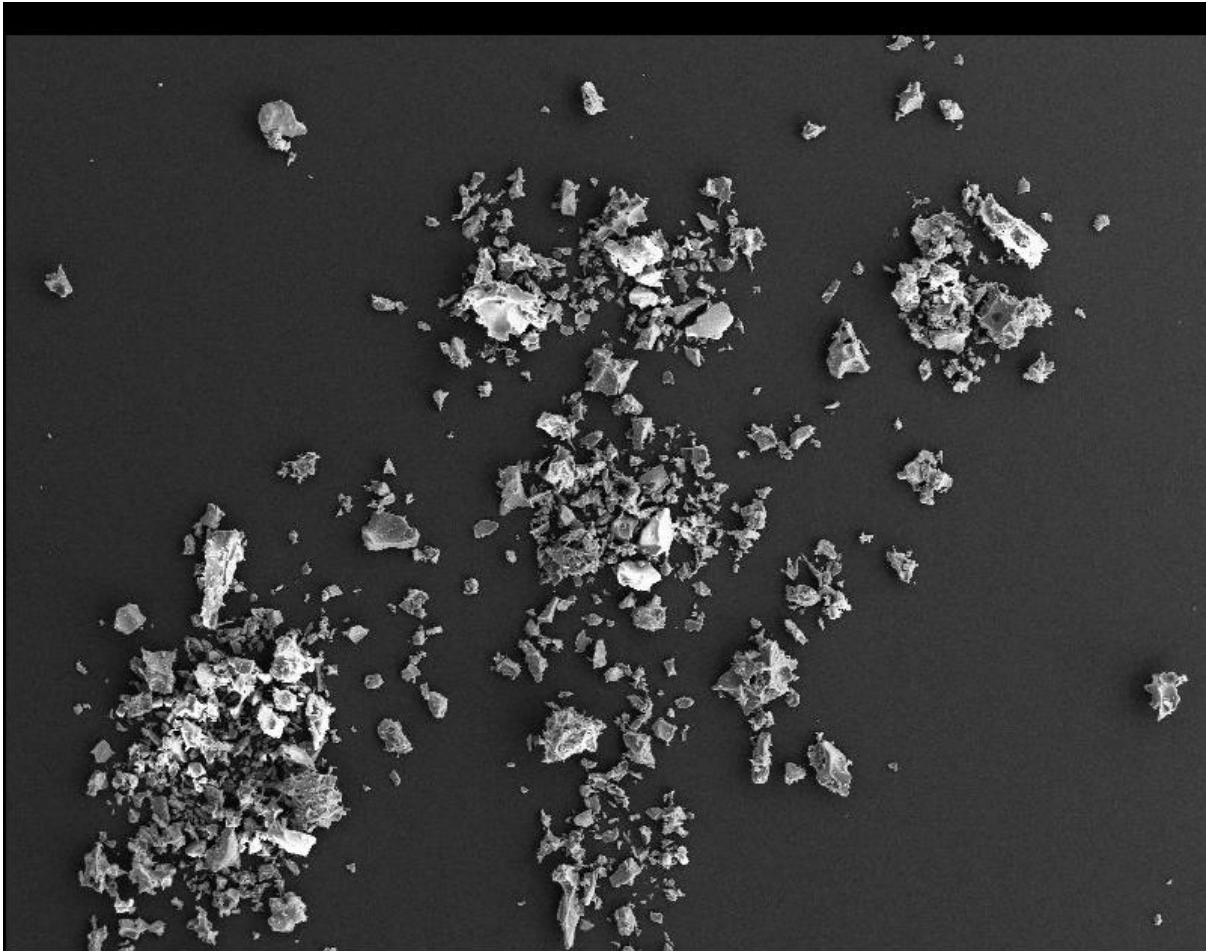
WD = 8.5 mm EHT = 20.00 kV
20 µm Signal A = SE2 Date :24 May 2011
8 Foss - 10.tif  Mag = 1.20 K X 

Sampling sites May 22 from 16:05 to 19:30 GMT.
Up to 24 hours of eruption time (map: Rósa Ólafsdóttir)



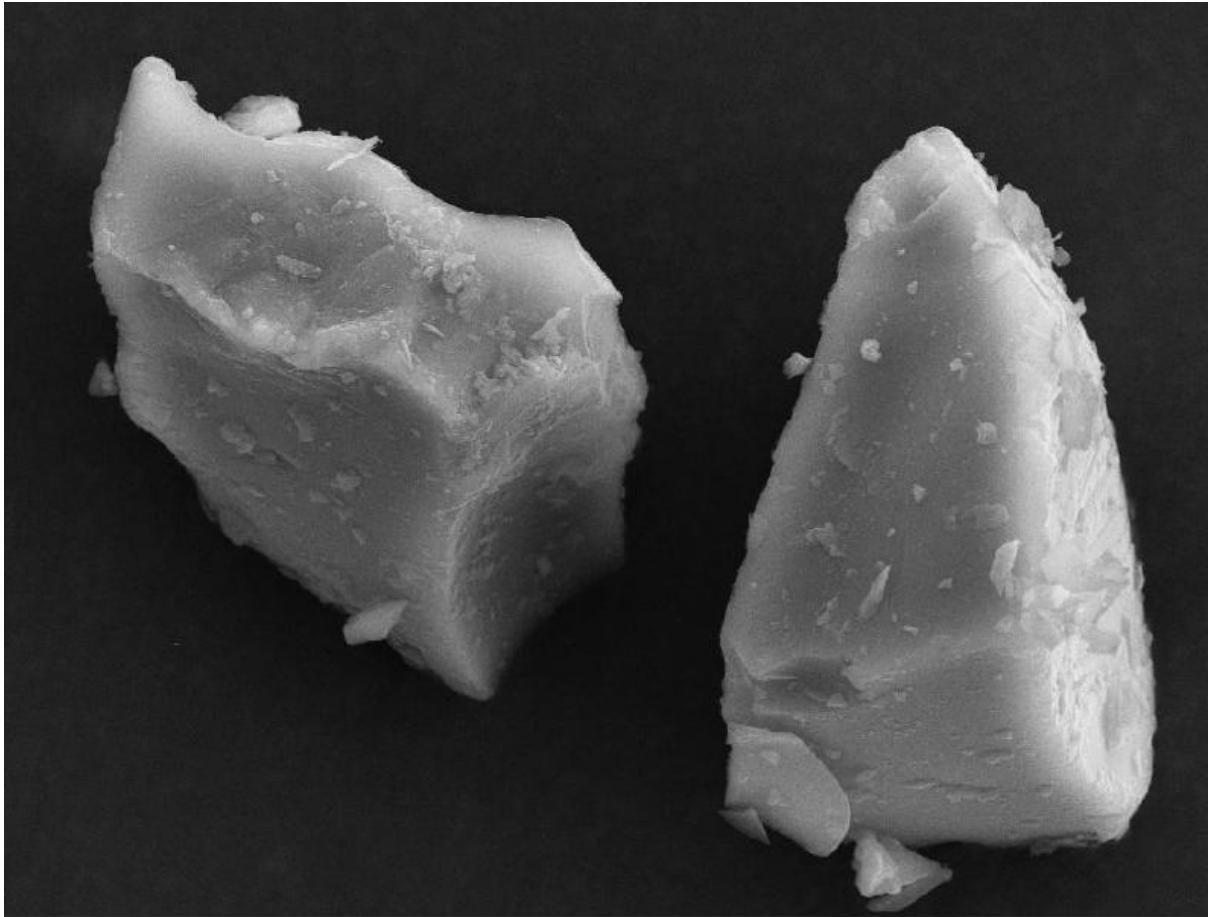
Skeiðarárbrú May 22 19:30 GMT 50 km from the eruption site





WD = 8.5 mm EHT = 20.00 kV Signal A = SE2 Date :24 May 2011
11 Skeiðará - 02.tif 200 µm Mag = 100 X





WD = 8.6 mm

EHT = 20.00 kV
3 μ m

Signal A = SE2

Date :24 May 2011

Mag = 6.25 K X



11 Skeiðará - 24.tif

