

G E O C H E M I S T R Y

ABSTRACTCollection and Analysis of Volcanic Gases at Surtsey

by

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The results of sampling and analysis of volcanic gases emitted during the recent eruption of Surtsey are reported. On several occasions natural conditions provided the possibility of sampling gases without detectable atmospheric contamination. Samples collected within the erupting crater or in its immediate vicinity are believed to represent the initial degassing stage of the magma. Later degassing stages are represented by samples collected at various distances from the crater. It is concluded that hydrogen, water and carbon components are released preferentially during the initial degassing stage but sulphur components show a relative increase as degassing proceeds.

The average atomic ratios of the three least contaminated samples is as follows: H:O:Cl:S:S:N; 176:100:0.40:2.58:5.85:0.135.