# Bonanati et al.; Supplementary Text 2

This supplementary text provides the analytical setting for the measurements of volcanic glass

The Eyjafiallajökull 2010 eruption and the preservation of medium-sized eruptions in marine surface sediment offshore southern Iceland

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**Analytical Setting**

Major Element compositions of volcanic glass were analyzed with a JEOL JXA 8200 electron microprobe equipped with five wavelength dispersive spectrometers including 3 high-sensitivity ones (2 PETH and TAPH) at GEOMAR Helmholtz Centre for Ocean Research, Kiel. The analytical setting was 15 kV accelerating voltage with 6 nA beam current and the electron beam defocused to 5 µm. Counting time was 5/10 s (peak/background) for Na; 20/10 s for Si, Al, Fe, Mg, Ca; 30/15 s for K, Ti, Cl, S; and 40/20 s for Mn and F. Reference material used for calibration and monitoring of routine measurements were basaltic glass (USNM 113498/1 VG-A99) for Ti, Fe, Mg, Ca, P; rhyolitic glass (USNM 72854 VG568) for Si, Al, K, scapolite (USNM R6600-1) for Na, S and Cl, all from the Smithsonian collection of natural reference materials (Jarosevich et al. 1980), rhyolitic glass KN-18 (Mosbach et al. 1991) for F and synthetic rhodonite for Mn. Two analyses of the standards were performed at the beginning and end of each analytical session and after every 50-60 analyses.

**References**

Jarosewich E., Nelen J. A., and Norberg J. A., 1980, Reference Samples for Electron Microprobe Analysis, Geostandards Newsletter 4, 43-47.

Mosbah, M., Metrich, N., and Massiot, P., 1991, PIGME fluorine determination using a nuclear microprobe with application to glass inclusions: Nuclear Instruments and Methods in Physics Research B58, p. 227-231.