The Data in this folder are from this publication:

2014 Hofmeister, A.M., Sehlke, A. and Whittington, A.G. Thermal diffusivity of Fe-rich pyroxene glasses and their melts. *Chemical Geology* **384**, 1-9.

**Data collected at Washington University, St. Louis, MO**

**Supported by NSF: EAR-1321857**

Files

Table 1 – Sample Descriptions

Table 2 – Chemical Compositions

Table 3a & 3b – Thermal Diffusivity Values (Calibrated Temperatures)

Table 4 – Thermal Diffusivity Initial Values (Calibrated Temperatures)

Figure 1 – UV Spectra – Excel Files

Column 1: Wavelength (WL/nm)

Column 2: Absorption Coefficient

|  |  |  |
| --- | --- | --- |
| **UV Spectra File Name** | **Sample Thickness (mm)** | **Description** |
| BAM118A | 0.2 | remelted Bamble |
| BAMGLS1A | 0.244 | remelted Bamble |
| BRENG3A | 0.35 | brown enstatite glass |
| BRENGL2A | 0.04 | brown enstatite glass |
| ENGL3A | 1.771 | En |
| ENGLS3A | 0.06 | enstatite glass |
| ENSGL2A | 0.211 | enstatite-end members glass |
| ENSGR1A | 0.143 | green enstatite glass |
| ENSGR2A | ~0.08 - 0.09 | green enstatite glass |
| ENSTB2A | 0.2 | brown enstatite glass |
| Fe10AS3A | 0.2 | Fs10 |
| Fe10AS4A | 0.1 | Fs10 |
| Fe10AS5A | 0.3 | Fs10 |
| Fe20PG6A | 0.04 | Fs21 |
| GRENG2A | 1.695 | green enstatite glass |
| GRENGL2A | 0.2 | green enstatite glass |
| MG4FE6A2 | 0.13 | Fs57 |
| MG5FE5A2 | 0.04 | Fs54 |
| STJGLS1A | 0.1 | remelted Lake St. John |

IR Spectra – PRN Files, Data not published

Column 1: Wave number

Column 2: Absorption

|  |  |  |
| --- | --- | --- |
| **IR Spectra File Name** | **Sample Thickness (mm)** | **Description** |
| BAMG1109 | 0.244 | apt mid bamble glass, 1000 scans, res = 2 |
| BAMG2109 | 0.244 | apt vis bamble pyx glass, 963 scans, res= 2 |
| BRENG221 | 1.34 | apt, nearvis brown en glass t ca, 500 scans, res= 2 |
| BRENG922.PRN | 0.925 | brown enstatite glass, 1000 scans, res= 4 |
| FE10D726 | 0.3 | apt fe 20mg 90 pyx glass, 500 scans, res = 2 |
| FE10G412 | 0.894 | apt mid fe10mg90, 1000 scans, res = 2 |
| FE20A726 | 0.12 | apt fe 20mg 90 pyx glass, 500 scans, res = 2 |
| FE30B726 | 0.06 | apt fe 20mg 90 pyx glass, 500 scans, res = 2 |
| FE5MG95 | 0.905 | Fe5Mg95 pyroxene, 1000 scans, res = 2 |
| FE5PG222 | 1.85 | apt fe05mg95sio3 glass, 1000 scans, res = 2 |
| FE5PX220 | 1.85 | apt for fe05mg95sio3 glass, 873 scans, res = 2 |
| FEA4725 | 0.4 | apt fe 20mg 95 pyx glass, 500 scans, res = 2 |
| GREGL920.PRN | 1.025 | green enstatite glass, 1000 scans, res = 4 |
| GRENG221 | 1.695 | apt, nearvis green en glass remelt, 500 scans, res= 2 |
| MG3FE719 | 0.3 | mg 0.3 fe 0.7 pyx glass, 1000 scans, res = 2 |
| MG3PX726 | 0.15 | apt new mg 0.3 fe 0.7 pyx glass, 2000 scans, res = 2 |
| STJ1108 | 0.1 | apt mid st johns glass, 1000 scans res = 2 |
| STJG2110 | 0.1 | apt vis st johns pyx glass, 976 scans, res = 2 |

Raw Probe Data

|  |  |  |
| --- | --- | --- |
| **Lava Type** | **Sample ID** | **Filename** |
| Fs7X1 | UN 10 | Hofmeister 8-21-09 Samples |
| Fs9X1 | UN 13 | Hofmeister 8-21-09 Samples |
| Fs11Wo1 | mt1c-Bam | Feb 2013 Probe |
| Fs22Wo4 | mt1e-StJ | Feb 2013 Probe |
| All other Samples | N/A | University of Missouri Data |