Reference

2016 A.M. Hofmeister, Alexander Sehlke, Geoffroy Avard, Anthony J. Bollasina, Geneviève Robert and Alan G. Whittington, Transport properties of glassy and molten lavas as a function of temperature and composition. *Journal of Volcanology and Geothermal Research* **327**, 380-388.

**See Glasses Database File in metadata folder for complete list of Glass samples/compositions and references.**

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

**Supported by NSF: EAR-1321857**

Files

Table 1 – Sample Descriptions

Table 2 – Chemical Compositions

Table 5 – Thermal Diffusivity Values (Calibrated Temperatures)

Table 6 – Thermal Diffusivity Initial Values (Calibrated Temperatures)

Figure 1a – UV Spectra – Excel Files

Column 1: Wavelength (WL/nm)

Column 2: Absorption Coefficient

|  |  |  |
| --- | --- | --- |
| **UV Spectra File Name** | **Sample Thickness (mm)** | **Description** |
| ANDAC1A | 0.36 | dac-and |
| DOLE4A | 0.2 | dolerite |
| SRDRHY1A | 9.41 | rhyodacite |
| SB03A | 1.33 | SB |
| SBA1F1A2 | 1.61 | SBA1F |
| SB02A | 3.55 | SB thick |
| DAC33A | 1.22 | Dacite thick |
| DAC44A | 0.47 | Dacite thin |
| DOLE4A | 0.13 | doler thin |
| FU06A4 | 0.04 | Arc Bas |
| FU18A4 | 0.21 | bas-and |
| SBA1225 | 8.35 | And-bas |

Figure 1b – Infrared Spectra – PRN files (More data than published in figure)

Collected with resolution of 2.000

Column 1: Wave number

Column 2: Absorption

|  |  |  |
| --- | --- | --- |
| **IR Spectra File Name** | **Sample Thickness (mm)** | **Description** |
| ANDQ1102.PRN | 0.278 | apt mid and dac saos 14 |
| ANDV1021.PRN | 1.39 | aperture visible pbm 36 |
| ANDV1101.PRN | 0.278 | apt near vis and dac |
| BASGL703.PRN | 0.05 | micro 200 mic apt, basalt glass |
| BASGLS22.PRN | 0.2 | apt mid basalt glass lev stripes |
| BASL1108.PRN | 0.24 | apt mid lev basalt glass |
| BASL2108.PRN | 0.24 | apt vis basalt glass |
| BASQ1102.PRN | 0.191 | apt mid bas and fu 18 |
| BASV1101.PRN | 0.191 | apt near vis bas and fu18 |
| DACQ1102.PRN | 0.367 | apt mid dacite sh305 |
| DACV1101.PRN | 0.367 | apt near vis sh304 dacite |
| DOL4NR.PRN | 0.04 | apt, near, fu 06 basalt |
| ENBSEV0.PRN | 7.98 | apt, near, enst bals glass evo |
| ENBSN01.PRN | 7.26 | apt, near, enst bals glass |
| FU06NR.PRN | 0.04 | apt near fu 06 basalt |
| FU06NV03.PRN | 0.21 | apt near-vis fu18 bas-and |
| FU18NR.PRN | 0.21 | apt, near-vis, fu18 bas-and |
| FU18NV02.PRN | 0.21 | apt, near-vis, fu18 bas-and |
| SBA1FNV1.PRN | 8.03 | apt near-vis, sba-1F greenish |
| SBA1225.PRN | 8.35 | apt near-vis, cryostat rt, sba, no flourine |
| SBA1227.PRN | 8.34 | apt, mct-caf2, sba no F |
| SBNQ01.PRN | 7.8 | SB |
| SBNV01.PRN | 7.8 | apt near-vis, sb yellowish |
| XYZ015.PRN | 8.03 | SBA, 1F |

Raw Probe Data

|  |  |  |
| --- | --- | --- |
| **Lava Type** | **Sample ID** | **Filename** |
| Dacite | SH305 | Alex Sehlke 9-15-2014 samples1 |
| ~~Ryodacite~~ | ~~SRD~~ | Not collected at Washington University |
| ~~Dacite-andesite~~ | ~~SA05-14~~ | Not collected at Washington University |
| Ocean Island | OIB1 | Hofmeister 5-5-09 |
| ~~Ocean Island~~ | ~~OIB2~~ | Not collected at Washington University |
| ~~MORB~~ | ~~MORB~~ | Not collected at Washington University |
| Icelandic | P-MORB | Hofmeister 5-5-09 |