Reference – Glasses in Chapter 10

In press Hofmeister, A.M. *Measurements, Mechanisms, and Models of Heat Transport in Condensed Matter and Planetary Interiors*. Elsevier, New York.

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

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

**Funding from NSF grant – EAR 1321857**

Files:

Table 1 - Sample Descriptions

Table 2 – Chemical Compositions (in wt%) and hydroxyl contents (in ppm by wt)

Table 6 - Thermal Diffusivity initial values and fitting parameters

Figure 1 – IR Spectra OH region – PRN Files

Column 1 = Wavenumber (cm-1)

Column 2 = Absorption Coefficient (mm-1)

|  |  |  |  |
| --- | --- | --- | --- |
| **IR Spectra File Name** | **Sample Thickness (mm)** | **Description** | **Sample ID** |
| ENGL227 | 1.763 | Enstatite | En |
| WOGL301 | 2.568 | Wo100 | Wo |
| EN50GL31 | 1.693 | diopside synthetic glass | Di |

Figure 2 – UV Spectra – Excel Files

Column 1 = Wavelength (nm)

Column 2 = Absorption Coefficient (mm-1)

|  |  |  |
| --- | --- | --- |
| **UV Spectra File Name** | **Sample Thickness (mm)** | **Description** |
| BRENG3A | 0.07 | brown enstatite |
| BRENGL3A | 0.35 | brown enstatite |
| GRENGL6A | 0.143 | green enstatite |
| WOGRGL1A | 0.533 | Wo |
| ENGL3A | 1.771 | En |

En-Wo Plot – Excel Files

\*Temperature in Kelvin was calibrated

|  |  |
| --- | --- |
| **Melt File Name** | **Description** |
| dioplgs | Diopside |
| Remeltdiopsideglass | Diopside |
| WoGlass | Wo |

Raw Probe Data

|  |  |
| --- | --- |
| **Sample Type** | **Filename** |
| Unknown 18, Wo100 | Hofmesiter samples 10-27-2010 |
| Unknown 20, Enstatite A | Hofmesiter samples 10-27-2010 |
| Unknown 21, Enstatite B | Hofmesiter samples 10-27-2010 |