**Introduction**

76545 – 76549 are from a rake sample taken at station 6 (figure). They look alike and were grouped together in the initial exam by Phinney et al. (1974).

**Petrography**

Phinney et al. (1977) used the SEM to study the matrix of 76545.

Lots of small white clasts set in black glass matrix. Some particles also have shiny black glass (Meyer 1994).

**Chemistry**

Only 76545 has been analyzed (table 1) and it is exactly the same as the soil collected with it.

**Processing**

Only 76545 and 76548 have thin sections.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>76545</td>
<td>7.7 grams</td>
</tr>
<tr>
<td>76546</td>
<td>24.3 grams</td>
</tr>
<tr>
<td>76547</td>
<td>10 grams</td>
</tr>
<tr>
<td>76548</td>
<td>2.53 grams</td>
</tr>
<tr>
<td>76549</td>
<td>9.2 grams</td>
</tr>
</tbody>
</table>

Regolith Breccia

Figure 1: Photo of 76545. Scale in mm. S73-19611
Figure 2: Photo of 76546. Scale in mm. S73-19621

Figure 3: Photo of 76547. Scale in mm. S73-19616
Figure 4: Photo of 76548. Scale in mm. S73-19620

Figure 5: Photo of 76549. Scale in mm. S73-19623
References for 77545.

Butler P. (1973) **Lunar Sample Information Catalog Apollo 17.** Lunar Receiving Laboratory. MSC 03211 Curator’s Catalog. pp. 447.


Meyer C. (1994) **Catalog of Apollo 17 rocks**: Volume 4. Curator’s Office JSC 26088 pp. 644 76 78


*Figure 6: Thin section photomicrograph of 76545 showing mostly matrix.*
Table 1. Chemical composition of 76545,

<table>
<thead>
<tr>
<th>reference weight</th>
<th>Simonds81</th>
<th>Wiesmann75</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiO2 %</td>
<td>43.45 (a)</td>
<td></td>
</tr>
<tr>
<td>TiO2</td>
<td>3.69 (a)</td>
<td></td>
</tr>
<tr>
<td>Al2O3</td>
<td>17.89 (a)</td>
<td></td>
</tr>
<tr>
<td>FeO</td>
<td>10.94 (a)</td>
<td></td>
</tr>
<tr>
<td>MnO</td>
<td>0.15 (a)</td>
<td></td>
</tr>
<tr>
<td>MgO</td>
<td>10.51 (a)</td>
<td></td>
</tr>
<tr>
<td>CaO</td>
<td>12.21 (a)</td>
<td></td>
</tr>
<tr>
<td>Na2O</td>
<td>0.4 (a)</td>
<td></td>
</tr>
<tr>
<td>K2O</td>
<td>0.13 (a)</td>
<td></td>
</tr>
<tr>
<td>P2O5</td>
<td>0.09 (a)</td>
<td></td>
</tr>
<tr>
<td>S %</td>
<td>0.07 (a)</td>
<td></td>
</tr>
</tbody>
</table>

Sc ppm: 2.43 (b)
V ppm: 191 (b)
Cr ppm: 2.96 (b)
Co ppm: 25 (b)
Ni ppm: 17.9 (b)
Zn ppm: 5.87 (b)
Cu ppm: 1.29 (b)
Ga ppm: 7.96 (b)
Ge ppm: 8.89 (b)
As ppm: 5.33 (b)
Se ppm: 4.88 (b)
Rb ppm: 114 (b)
Sr ppm: 9.36 (b)
Y ppm: 25 (b)
Zr ppm: 14 (b)
Nb ppm: 17.9 (b)
Mo ppm: 5.87 (b)
Ru ppm: 1.29 (b)
Rh ppm: 7.96 (b)
Pd ppm: 8.89 (b)
Ag ppm: 5.33 (b)
Cd ppm: 4.88 (b)
In ppm: 114 (b)
Sn ppm: 9.36 (b)
Sb ppm: 25 (b)
Te ppm: 17.9 (b)
Cs ppm: 5.87 (b)
Ba ppm: 1.29 (b)
La ppm: 7.96 (b)
Ce ppm: 8.89 (b)
Pr ppm: 5.33 (b)
Nd ppm: 4.88 (b)
Sm ppm: 1.29 (b)
Eu ppm: 7.96 (b)
Gd ppm: 8.89 (b)
Tb ppm: 5.33 (b)
Dy ppm: 4.88 (b)
Ho ppm: 114 (b)
Er ppm: 9.36 (b)
Tm ppm: 25 (b)
Yb ppm: 17.9 (b)
Lu ppm: 5.87 (b)
Hf ppm: 1.29 (b)
Ta ppm: 7.96 (b)
W ppm: 8.89 (b)
Re ppm: 5.33 (b)
Os ppm: 4.88 (b)
Ir ppm: 114 (b)
Pt ppm: 9.36 (b)
Au ppm: 17.9 (b)
Th ppm: 5.87 (b)
U ppm: 1.29 (b)

technique: (a) XRF, (b) IDMS