

76121
Soil
304 grams

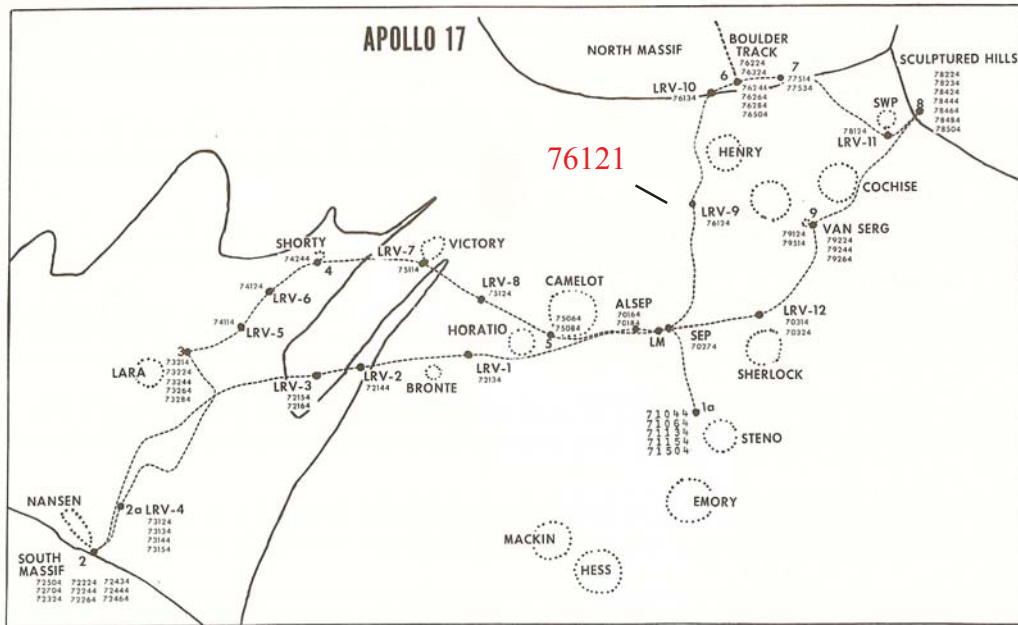


Figure 1: Location of soil sample 76121 at LRV-9 on Apollo 17 map (Meyer 1973). S73-24071

Introduction

76120- 76124 is a soil sample collected at LRV – 9 on the smooth mare regolith surface. It did not include large particles and has high maturity.

Petrography

Morris (1978) determined the maturity index ($I_s/FeO = 71$).

Chemistry

Korotev and Kremser (1992) reported high FeO content (figures 2 and 3).

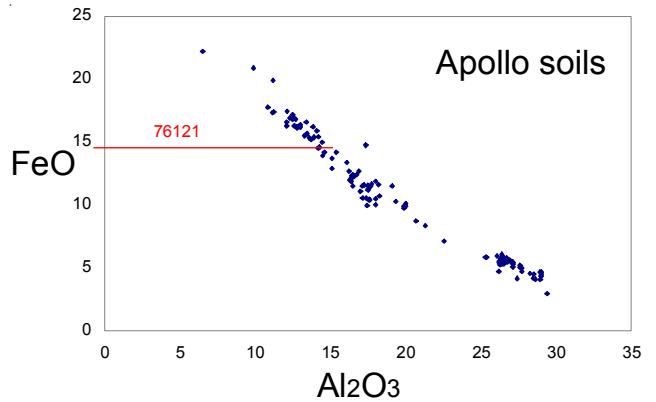


Figure 2: FeO content of 76121 compared with other Apollo soils.

Table 1. Chemical composition of 76121.

| | | |
|--------------------------------|-----------|-----|
| <i>reference</i> | Korotev92 | |
| <i>weight</i> | | |
| SiO ₂ % | | |
| TiO ₂ | | |
| Al ₂ O ₃ | | |
| FeO | 14.5 | (a) |
| MnO | | |
| MgO | | |
| CaO | | |
| Na ₂ O | 0.405 | (a) |
| K ₂ O | | |
| P ₂ O ₅ | | |
| S % | | |
| <i>sum</i> | | |
| Sc ppm | 43.7 | (a) |
| V | | |
| Cr | 2640 | (a) |
| Co | 35.3 | (a) |
| Ni | 230 | (a) |
| Cu | | |
| Zn | | |
| Ga | | |
| Ge ppb | | |
| As | | |
| Se | | |
| Rb | | |
| Sr | 140 | (a) |
| Y | | |
| Zr | 230 | (a) |
| Nb | | |
| Mo | | |
| Ru | | |
| Rh | | |
| Pd ppb | | |
| Ag ppb | | |
| Cd ppb | | |
| In ppb | | |
| Sn ppb | | |
| Sb ppb | | |
| Te ppb | | |
| Cs ppm | | |
| Ba | 126 | (a) |
| La | 8.66 | (a) |
| Ce | 24.8 | (a) |
| Pr | | |
| Nd | 18 | (a) |
| Sm | 6.92 | (a) |
| Eu | 1.46 | (a) |
| Gd | | |
| Tb | 1.62 | (a) |
| Dy | | |
| Ho | | |
| Er | | |
| Tm | | |
| Yb | 5.71 | (a) |
| Lu | 0.825 | (a) |
| Hf | 5.86 | (a) |
| Ta | 0.93 | (a) |
| W ppb | | |
| Re ppb | | |
| Os ppb | | |
| Ir ppb | 7 | (a) |
| Pt ppb | | |
| Au ppb | < 5 | (a) |
| Th ppm | 1.11 | (a) |
| U ppm | 0.25 | (a) |
| <i>technique:</i> | (a) INAA | |

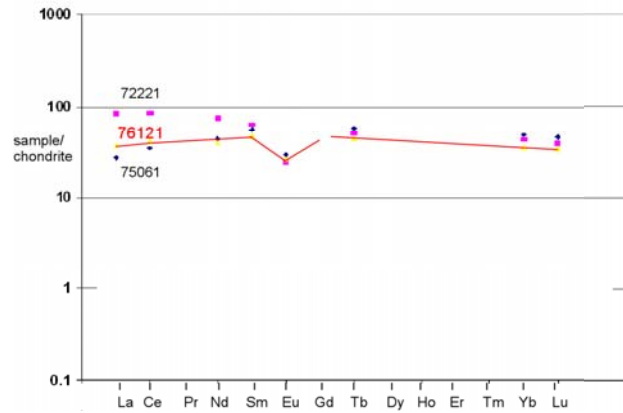
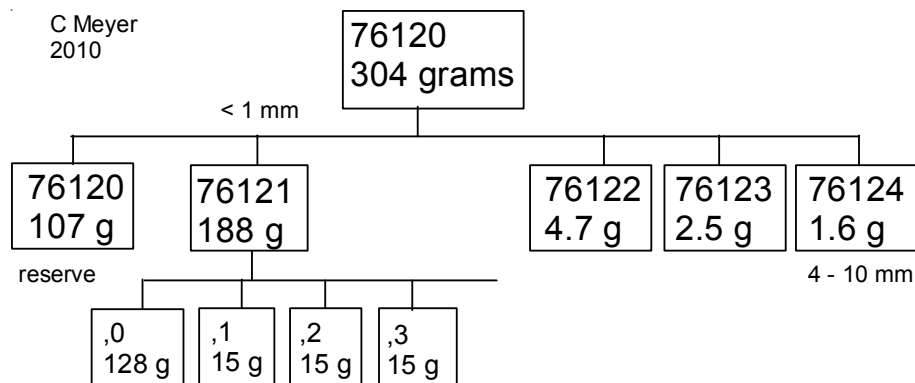


Figure 3: Normalized rare-earth-element diagram for 76121 showing similarity to mare soil 75061.



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