

73131
Soil (or soil clod)
238 grams



Figure 1: Photo of sample location 73130. AS17-138-21097

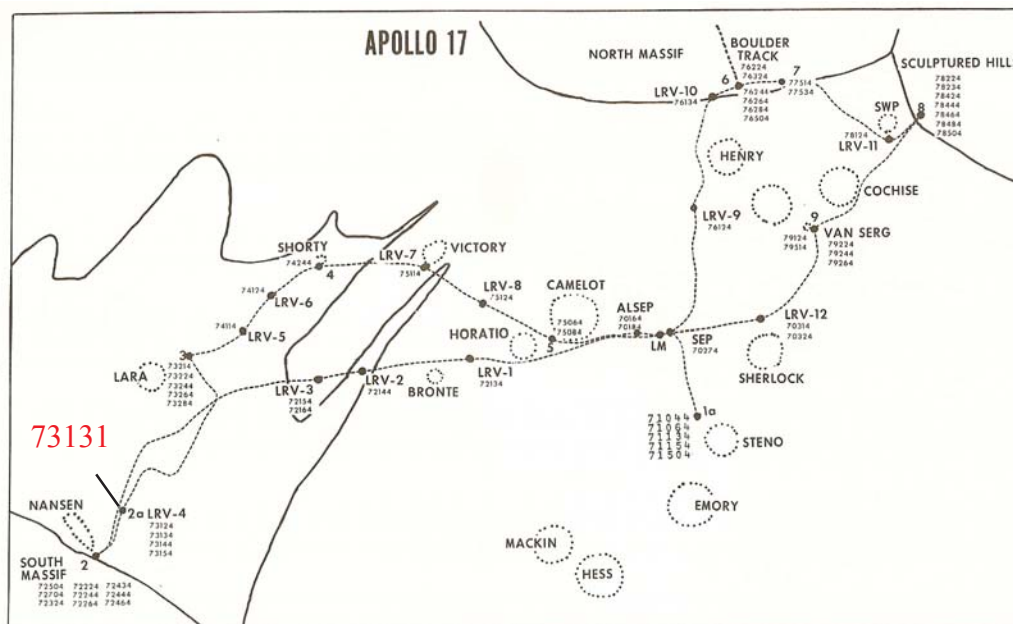


Figure 2: Location of soil sample 73130 at LRV-4 on Apollo 17 map (Meyer 1973). S73-24071

Table 1. Chemical composition of 73131.

| reference weight | Korotev92 | Eldridge74 | | |
|------------------|-----------|------------|-----|----------|
| SiO2 % | | | | |
| TiO2 | | | | |
| Al2O3 | | | | |
| FeO | 6.87 | 7.18 | (a) | |
| MnO | | | | |
| MgO | | | | |
| CaO | | | | |
| Na2O | 0.437 | 0.431 | (a) | |
| K2O | | 0.14 | (b) | |
| P2O5 | | | | |
| S % | | | | |
| sum | | | | |
| Sc ppm | 14.5 | 15.1 | (a) | |
| V | | | | |
| Cr | 1240 | 1290 | (a) | |
| Co | 20.3 | 25.5 | (a) | |
| Ni | 157 | 227 | (a) | |
| Cu | | | | |
| Zn | | | | |
| Ga | | | | |
| Ge ppb | | | | |
| As | | | | |
| Se | | | | |
| Rb | | | | |
| Sr | 147 | 146 | (a) | |
| Y | | | | |
| Zr | 210 | 190 | (a) | |
| Nb | | | | |
| Mo | | | | |
| Ru | | | | |
| Rh | | | | |
| Pd ppb | | | | |
| Ag ppb | | | | |
| Cd ppb | | | | |
| In ppb | | | | |
| Sn ppb | | | | |
| Sb ppb | | | | |
| Te ppb | | | | |
| Cs ppm | | | | |
| Ba | 190 | 167 | (a) | |
| La | 17.8 | 17.1 | (a) | |
| Ce | 46.8 | 44 | (a) | |
| Pr | | | | |
| Nd | 22 | 26 | (a) | |
| Sm | 6.76 | 7.02 | (a) | |
| Eu | 1.18 | 1.18 | (a) | |
| Gd | | | | |
| Tb | 1.3 | 1.35 | (a) | |
| Dy | | | | |
| Ho | | | | |
| Er | | | | |
| Tm | | | | |
| Yb | 5.01 | 5.14 | (a) | |
| Lu | 0.691 | 0.708 | (a) | |
| Hf | 5.34 | 5.27 | (a) | |
| Ta | 0.65 | 0.69 | (a) | |
| W ppb | | | | |
| Re ppb | | | | |
| Os ppb | | | | |
| Ir ppb | 4.2 | 7.3 | (a) | |
| Pt ppb | | | | |
| Au ppb | 2.3 | 2.9 | (a) | |
| Th ppm | 2.5 | 2.56 | (a) | (b) |
| U ppm | 0.76 | 0.71 | (a) | 0.63 (b) |

technique: (a) INAA, (b) radaition count.

Introduction

Sample 73130 was collected as a “soil clod” from the bottom of a small, fresh crater. The astronauts referred to it as “instant rock”, and sure enough it completely broke up during transit.

Petrography

Morris (1978) reported the maturity index (Is/FeO = 16), which is way immature ! The sample has very low FeO (Korotev and Kremser (1992)).

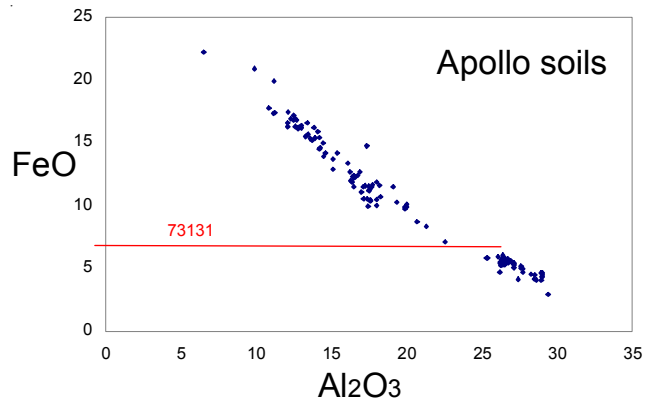


Figure 3: FeO content for 73131 compared with other Apollo soils.

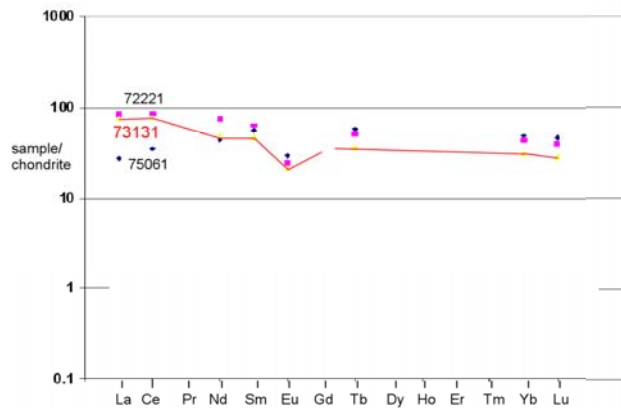
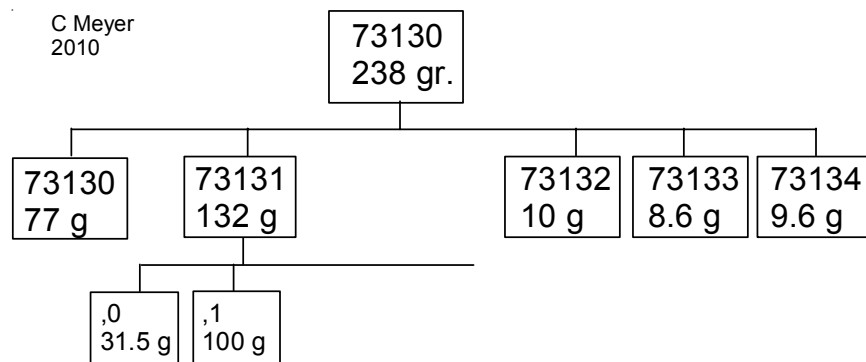


Figure 4: Normalized rare-earth-element diagram for 73131 compared with mare and highland soils.



References for 73131

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