

# 72431

## Soil

79.5 grams

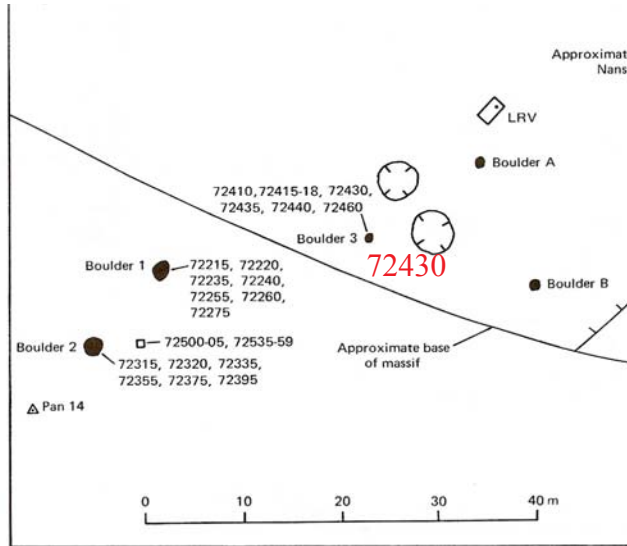


Figure 1: Map for station 2, Apollo 17.

### Introduction

72430 is the soil scooped up when 72435 was picked up from the regolith after it was chipped from the boulder and it was returned in the same bag. It has exactly the same composition as the regolith from beneath the boulder (74240, 74260).

### Petrography

Morris (1978) determined the maturity index ( $I_s/FeO = 63$ ). Meyer (1973) cataloged the coarse-fines.

### Chemistry

Korotev and Kremser (1992) determined the chemical composition by neutron activation analysis (table).

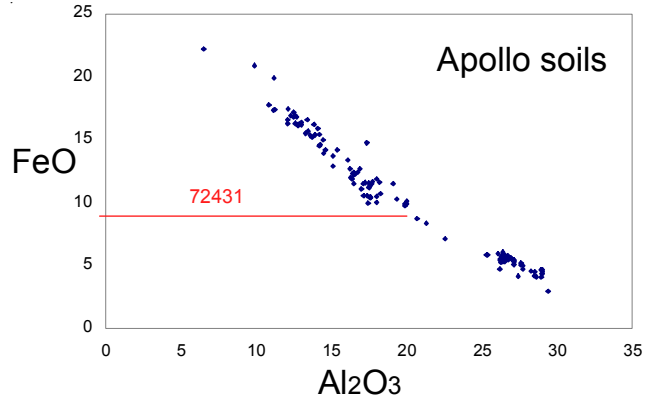


Figure 2: FeO content of 72431 compared with that of other Apollo soil samples.

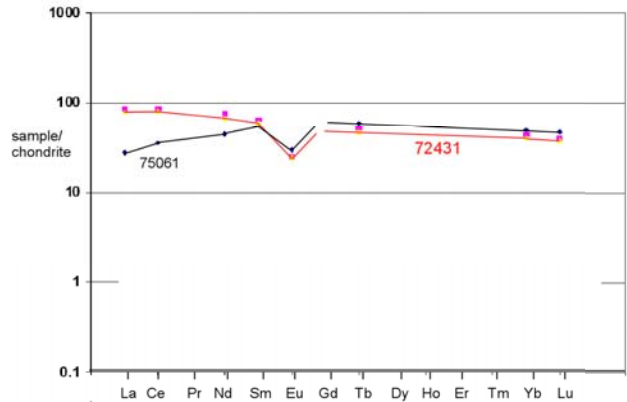
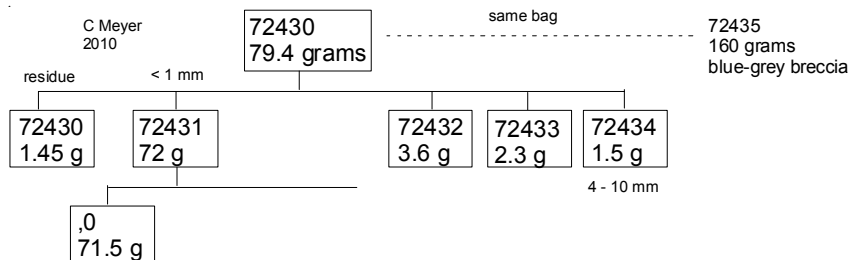


Figure 3: Normalized rare-earth-element diagram for 72431.



**Table 1. Chemical composition of 72431.**

reference	Korotev92		
weight			
SiO <sub>2</sub> %			
TiO <sub>2</sub>			
Al <sub>2</sub> O <sub>3</sub>			
FeO	8.92	8.55	(a)
MnO			
MgO			
CaO			
Na <sub>2</sub> O	0.464	0.464	(a)
K <sub>2</sub> O			
P <sub>2</sub> O <sub>5</sub>			
S %			
sum			
Sc ppm	19.6	18.6	(a)
V			
Cr	1620	1509	(a)
Co	28.9	25.6	(a)
Ni	242	222	(a)
Cu			
Zn			
Ga			
Ge ppb			
As			
Se			
Rb			
Sr	158	159	(a)
Y			
Zr	270	240	(a)
Nb			
Mo			
Ru			
Rh			
Pd ppb			
Ag ppb			
Cd ppb			
In ppb			
Sn ppb			
Sb ppb			
Te ppb			
Cs ppm			
Ba	209	196	(a)
La	17.3	18.2	(a)
Ce	46	47.9	(a)
Pr			
Nd	30	30	(a)
Sm	8.4	8.65	(a)
Eu	1.36	1.35	(a)
Gd			
Tb	1.62	1.68	(a)
Dy			
Ho			
Er			
Tm			
Yb	6.26	6.5	(a)
Lu	0.857	0.894	(a)
Hf	6.75	6.69	(a)
Ta	0.83	0.82	(a)
W ppb			
Re ppb			
Os ppb			
Ir ppb	8.3	6.7	(a)
Pt ppb			
Au ppb	2.9	4.6	(a)
Th ppm	2.9	3.3	(a)
U ppm	0.75	0.78	(a)
technique:	(a) INAA		

**References for 72431**

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