

INTRODUCTION: 15319 is a friable regolith breccia (Fig. 1) with a greenish matrix with abundant spherules in at least one part. It is not a purely green glass clod, as several pale-colored clasts are visible, but it is lower in incompatible elements than most other analyzed regolith breccias. It has no obvious zap pits. It was collected as part of the rake sample from the north-east rim of Spur Crater.

CHEMISTRY: S.R. Taylor et al. (1973) analyzed a bulk matrix sample for minor and trace elements (Table 1, Fig. 2). The sample has among the lowest incompatible element abundances of Apollo 15 regoliths or regolith breccias, with the possible exception of some green glass clods. S.R. Taylor et al. (1973) modeled its composition as a mixture of 37.8% highland basalt and 62.2% low-K Fra Mauro basalt, but such a modeling would appear to have no physical significance for 15319. Indeed, these figures seem to be essentially reversed, given the low incompatibles in 15319. S.R. Taylor et al. (1972) and S.R. Taylor (1973) plotted some of the data, and these plots indicate that chemically 15319 contains about 75% "highland basalt."

PROCESSING AND SUBDIVISIONS: Several chips were removed from ,0, but only ,2 (Fig. 1) was allocated. No thin sections have ever been made. ,0 is now 7.06 grams.

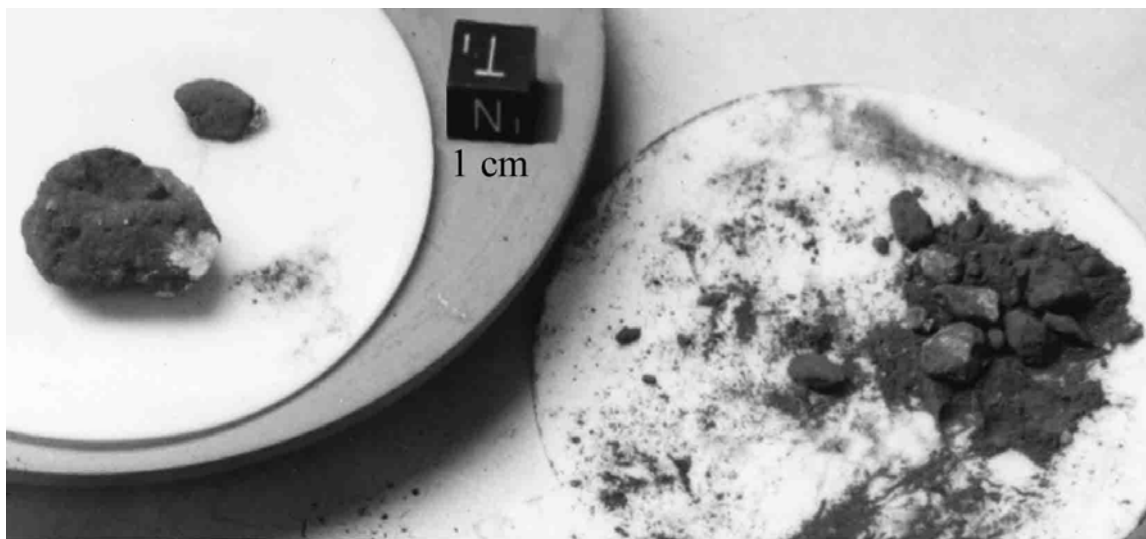


Figure 1. Post split view of 15319, showing ,0 and its daughter ,2 (left) and the chips, fragment, and fines which are ,1 (right). S-71-57211

TABLE 15319-1. Bulk Analysis of 15319,2

Wt%	SiO ₂	
	TiO ₂	
	Al ₂ O ₃	
	FeO	
	MgO	
	CaO	
	Na ₂ O	
	K ₂ O	
	P ₂ O ₅	
(ppm)	Sc	33.0
	V	140.0
	Cr	2400
	Mn	
	Co	48.0
	Ni	248
	Rb	2.0
	Sr	
	Y	35.0
	Zr	156.0
	Nb	10.1
	Hf	3.5
	Ba	134
	Th	1.8
	U	0.5
	Pb	2.5
	La	9.8
	Ce	26.0
	Pr	3.8
	Nd	16.8
	Sm	5.6
	Eu	1.05
	Gd	7.1
	Tb	1.14
	Dy	6.9
	Ho	1.67
	Er	4.7
	Tm	0.74
	Yb	4.5
	Lu	0.69
	Li	
	Be	
	B	
	C	
	N	
	S	
	F	
	Cl	
	Br	
	Cu	11.0
	Zn	
(ppb)	I	
	At	
	Ga	4400
	Ge	
	As	
	Se	
	Mo	
	Tc	
	Ru	
	Rh	
	Pd	
	Ag	
	Cd	
	In	
	Sn	180
	Sb	
	Te	
	Cs	100
	Ta	
	W	180
	Re	
	Os	
	Ir	
	Pt	
	Au	
	Hg	
	Tl	
	Pb	

(1)

References and methods:

- (1) S.R. Taylor et al. (1973);
spark source mass spec,
emission spec.

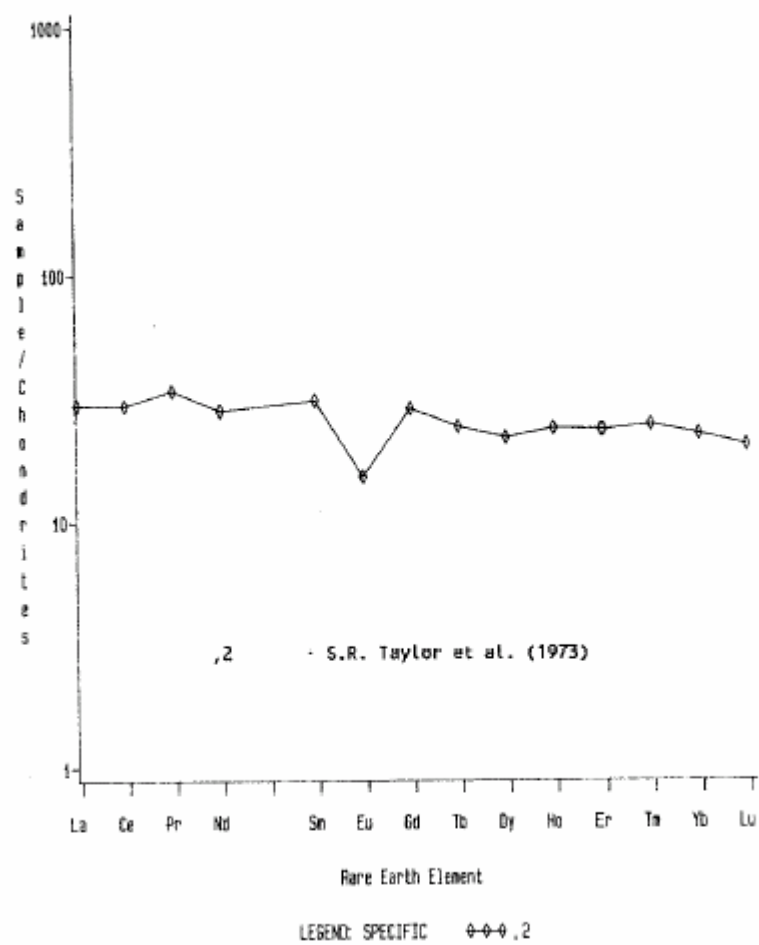


Figure 2. Rare earths in 15319,2.