

DEPARTMENT OF COMMERCE

Bureau of Standards

Certificate of Analyses

OF

STANDARD SAMPLE No. 70

FELDSPAR

[ALL RESULTS ARE BASED ON A SAMPLE DRIED FOR ONE HOUR AT 105°C.]

Analyst *	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	P ₂ O ₅	MnO	BaO	Loss on ignition
1	66.63	18.04	0.03	0.006 ^a	0.08 ^a	2.38 ^b	12.58 ^b	0.002	0.012 ^c .015 ^d	0.001	0.035	0.23
2	66.68	18.01	.03	.02	.05	2.37	12.58	.002	.01	.001	.033	.21
Averages.....	66.66	18.03	0.03	0.013	0.07	2.38	12.58	0.002	0.012	0.001	0.034	0.22

Tests on 5.0 g samples indicated the absence of Cr₂O₃, V₂O₅, ZrO₂, and SrO.

Spectroscopic tests by Dr. W. F. Meggers, of the Bureau of Standards, revealed minute traces of lead and gallium but no beryllium, lithium, rubidium, or cesium.

Unless otherwise specified, these analyses were made by the methods described by W. F. Hillebrand in "The Analysis of Silicate and Carbonate Rocks," U. S. Geological Survey Bulletin 700.

(a) The sample (5.00 g) was dissolved in nitric, hydrofluoric, and sulphuric acids, evaporated to copious fumes of sulphuric acid, cooled, diluted, nearly neutralized with sodium hydroxide and poured into an excess of sodium hydroxide containing sodium carbonate,

allowed to stand one hour and filtered. The precipitate was then dissolved in hydrochloric acid and the iron, titanium, etc., in this solution precipitated with ammonium hydroxide, using methyl red as indicator. The calcium and magnesium were determined in the filtrate in the usual manner.

(b) The residue from the extraction of the sintered cake obtained in the J. Lawrence Smith method was dried and again fused with ammonium chloride and calcium carbonate, extracted with hot water as before and this extract added to the first extract. Otherwise the J. Lawrence Smith procedure was followed exactly.

(c) Gravimetric.—Weighed as Mg₂P₂O₇.

(d) Alkalimetric.

* LIST OF ANALYSTS

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2. H. B. Knowles, Bureau of Standards.

Washington, D. C.
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GEORGE K. BURGESS,
Director.