

V. The effect of recrystallization on the purity of samples of the salt.

VI. The relative effect of drying and fusing samples of dichromate.

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### NOTE.

**Scandium from a Brazilian Source** (Preliminary Announcement).—While working upon zirconium, the writer observed that certain hydroxides from residues from which the most strongly basic elements had been removed, and which consisted mainly of iron, aluminium and titanium, dissolved in hydrofluoric acid imperfectly owing to the formation of a gelatinous substance. Several grams of this were collected and boiled for some time with concd. sulfuric acid in a platinum dish. The cooled residue dissolved readily even in hot water. The sulfate solution gave a precipitate with oxalic acid, and the oxalate upon ignition gave a pale yellowish oxide. The solution in hydrochloric acid showed no absorption spectrum. The dilute chloride solution was rapidly precipitated by boiling with sodium thiosulfate. Oxalic acid gave no precipitate when heated with the original hydroxides dissolved in hydrochloric acid. These reactions prove conclusively that the gelatinous precipitate first formed consisted mainly of scandium fluoride.

The above residues were obtained from Brazilian zirconia. At the present time there may be a little delay before work upon a large number of varieties of zirconium minerals is undertaken. C. JAMES.

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## THE CONFIGURATIONS OF ORGANIC COMPOUNDS AND THEIR RELATION TO CHEMICAL AND PHYSICAL PROPERTIES. II.

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In this paper the physical and chemical properties of the stereomeric, unsaturated acids will be coordinated with the configurations given in the first communication,<sup>1</sup> as far as the experimental observations at hand permit, with a critical revision of previous views in this field.

Owing to the imperfect and inadequate experimental data, a perfectly satisfactory treatment of the subject is not possible at present; even in the few existing systematic investigations, not infrequently the members of the series most important from the viewpoint of theory were omitted, as beyond the scope of researches.

<sup>1</sup> THIS JOURNAL, 40, 704 (1918).