ART. XXXIV.—*Remarks on the alkalies contained in the mineral Leucite*; by J. LAWRENCE SMITH.

IN examining recently many of the silicates containing alkalies, my attention has been called to Leucite, and it is on that mineral especially that I would now remark, reserving for another time my observations on the other silicates.

The specimens of leucite examined came from four localities, Vesuvius, Andernach, Borghetta, and Frescati. They were about as good specimens as are obtained from those localities, although all of them were not equally pure. The alkalies found in each calculated as potash were—

Vesuvius,	-	-	-	-	21·85
Andernach,	-	-	-	-	20·06
Borghetta,	-	-	-	-	20·68
Frescati,	-	-	-	-	20·38

The specimen from Andernach was analyzed for the silica, &c., and found to contain silica 54·75, alumina 23·08, and 1·55 of oxyd of iron; this last seemed to be mechanically disseminated through the crystals.

I say above in relation to the alkalies "all calculated as potash," for the reason that there is a notable quantity of rubidium and cæsium present in all the specimens above mentioned. In fact, by the method adopted in testing for these alkalies abundant indications are obtained of the presence of rubidium, cæsium (the last not so readily), even when operating on but half a gram of the mineral. I am now engaged in working out a method of estimating quantitatively rubidium and cæsium in the presence of other alkalies; by this method, not yet perfected, the quantity of these alkalies in leucite is found to be about $\frac{1}{100}$ of one per cent of the entire mineral.

Of course it is not at all remarkable that the potash in the different specimens of leucite should be the same; but it is a matter of interest to know that, from whatsoever locality it comes, this minute quantity of rubidium and cæsium occurs with it. On some future occasion I hope to be able to bring together certain generalities in this connection of more or less interest to mineralogists.

I have also detected rubidium in half a gram of margarodite and Warwick mica, and have failed to detect it in apophyllite, thomsonite, pectolite, elæolite, chesterlite, cancrinite and other silicates.