Analysis of the Calcareous Tuffa at Green Point. By Mr. Tredgold, Cape Town.

[*In a Letter to Dr. Smith.*]

Cape Town, 14*th October*, 1829.

Sir,

In reply to your inquiry respecting the result of my examination of a specimen of lime-stone, which was handed me by Mr. Nisbet in the month of August, 1828, I beg to forward you the following statement of my experiments, which I have copied from a memorandum I made at that time.

To one hundred grains of the stone reduced to powder, Sulphuric Acid was added, and afterwards diluted with water; Carbonic Acid was expelled, and the mixture was then exposed to a sufficient heat to evaporate the water and superabundant Sulphuric Acid. The dried mass was pulverised, and washed several times in warm water; and to these washings, when cold and filtered, Carbonate of Potass was added; a small precipitate was produced, which when collected and dried, weighed four grains, and this I found to be Alumine.

Having ascertained that the stone was chiefly Carbonate of Lime, I bruised 100 grains of it, and immersed it in Nitric Acid, and by this means 38 grains of Carbonic Acid was expelled, and 12 grains of earth of a siliceous nature left undissolved.

Another 100 grains of it I calcined, and in this experiment the loss was 42 grains, which, allowing four grains for water, leaves 38 grains of Carbonic Acid expelled.

I considered these experiments sufficient to enable me to conclude that every 100 lbs. of the stone may contain, including the small portion of water noticed in the last experiment, about 84 lbs. of Carbonate of Lime.

4 lbs. of Aluminous earth.

12 lbs. of Siliceous earth.

I am, Sir,

Your most obedient Servant,

J. H. Tredgold.

To A. Smith, Esq. M.D.
&c. &c.
Cape Town.