

Both paints are well-ground. They have been submitted to practical tests in comparison with the Torbay paint in a well-known extensive Government establishment, in which Torbay and other iron-oxide paints have been largely employed.

The following is the result of the trial of the yellow-brown paint:—

New Zealand Paint.  
 17lb. oxide ground in oil required.  
 5½ pints boiled linseed oil.  
 1½ " turpentine.  
 2lb. patent driers.  
 Weight, made up, 26lbs.  
 26lb. paint covered 146 sup. yards; one coat.  
 The paint worked out well, with good body.  
 There was no sediment in pot as work proceeded.

Torbay Paint.  
 17lb. oxide ground in oil required.  
 5 pints boiled linseed oil.  
 1 pint turpentine.  
 2lb. patent driers.  
 Weight, made up, 25lbs.  
 25lb. paint covered 110 sup. yards; one coat.  
 The paint worked out well, with fair body.  
 There was no sediment in pot as work proceeded.

The New Zealand oxide is a better paint than Torbay, so far as covering-power is concerned; and the difference in amount of materials required in making-up the New Zealand oxide, as against the Torbay, does not even bring the latter pigment up to the former.

The roasted purple-brown paint required exactly the same proportions of oil driers and turpentine as the yellow-brown paint; 26lb. covered 130 yards superficial, as against 146 yards for the same weight of the unroasted oxide. In the latter case, the iron surface to which the paint was applied was thoroughly warmed by the sun at the time of painting, and this may, to a great extent, account for the somewhat larger area covered by the paint.

The price paid for the Torbay paint, which was tried against the New Zealand, was £1 4s. 6d. per hundredweight, ground in oil to paste.

Samples of the two paints are at present undergoing practical tests at the works of the London and North-Western Railway, Crewe, through the kindness of Mr. F. W. Webb. The results will be reported as soon as received.

11th July, 1895.

F. A. ABEL,

Secretary and Director, Imperial Institute.

## No. 2.

New Zealand Geological Survey (Laboratory).

RESULT of ANALYSIS of SPECIMEN No. 6,898 from TE KUITI. Received 13th August, 1895; reported on 14th August, 1895.

### *Sub-crystalline Limestone or Marble.*

THIS is a very compact homogeneous stone of a pleasant brown colour. It would polish to a marble of medium quality, and make a good ornamental building-stone for corners, facets, &c. The analysis subjoined shows it to be almost pure calcic carbonate:—

Calcic carbonate ...	...	...	...	...	...	Per cent.
Magnesia carbonate	...	...	...	...	...	92.78
Sesqui-oxide of iron	...	...	...	...	...	2.93
Alumina	...	...	...	...	...	1.79
Silica ...	...	...	...	...	...	Traces
Water ...	...	...	...	...	...	2.29
						21
						100.00

WILLIAM SKEY,  
 Analyst to the Mines Department.

*Approximate Cost of Paper.*—Preparation, not given; printing (2,350 copies), £2 9s.

By Authority: SAMUEL COSTALL, Government Printer, Wellington.—1895.

Price 3d.]