lacustrine Clay is of a very light greyish or yellowish tint, and is much paler than any submarine inorganic deposit. It consists chiefly of finely divided quartz and mica, with minor proportions of felspathic, chloritic, and ferro-magnesian minerals.[1] There is always present a certain amount of clay proper, *i.e.* amorphous hydrated alumino-ferric silicate, which imparts to the deposit its plastic character; but the amount is often very small, and always much smaller than in oceanic Clays.

Without resorting to an exhaustive analysis, an indication of the proportion of true clay in these deposits may be gained from their ignition losses. Organic matter being absent, ignition loss will represent the water of hydration of the clay present *plus* that of the mica present. Five samples of pale Clay, which gave little or no coloration with caustic soda solution, and were therefore regarded as free, or nearly so, from organic matter, were thus assayed; they were weighed out after drying at 110° C.

Deposit.	Loss at Low Red Heat.	Total Loss over Blast.
Loch Assynt, 83 feet . .	...	3·93 per cent.
,, Ness, 95 ,, . .	...	1·95 ,,
,, Laggan, 59 ,, . .	...	3·48 ,,
,, Earn, 61 ,, . .	3·30 per cent.	4·24 ,,
,, Maree, 56 ,, . .	2·96 ,,	3·44 ,,

Since ideal clay ($Al_2O_3.2SiO_2.2H_2O$) would give off over 14 per cent. of water on ignition, these figures speak for themselves. A rough attempt at discriminating between water of clay and water of mica was made on the last two samples, by igniting first at low red heat and then over the blast. If it were desired, the method might be made one of considerable accuracy by careful temperature adjustment, direct weighing of the disengaged water, and addition of sodium carbonate or lead peroxide in the final ignition. As it is, the Loch Earn sample shows about 23 per cent. of clay and 20 per cent. of mica, the Loch Maree sample about 21 per cent. and 11 per cent. respectively.

Clays are met with in all the larger lochs. The absolute depths at which they occur are of course very variable; but generally speaking they are characteristic of relatively shallow water, and they are never found, except as thick under-layers, at the bottom of deep basins. They constitute the natural silt or alluvium of lochs, composed of the geological detritus of the surrounding country. Clays may be introduced directly by erosion of the banks or indirectly

[1] For analyses of Clays and determinations of minerals see *loc. cit.*