

The remaining specimens, four in number, belong to our second Group. They are these:—

3. Fragment of hard stucco from ancient relief, Ak-sipil Site.
4. Fragment of hard stucco from Kara-döbe Site.
9. Stucco from relief decoration of Buddhist shrines, Dandān-Uiliq Site.
11. Hard stucco, probably fragment of large image, found at Rawak, beyond Dandān-Uiliq.

These four specimens are essentially plaster of Paris. The native gypsum from which they have been formed has been prepared in the usual way by moderate heating (called 'burning') and then been mixed with water just as is now done in making plaster casts. These processes were known to classical antiquity in Europe. There are two observations that should be made in connexion with specimens 3 and 11. The latter is unusually crystalline; the former shows that it has been subjected, after completion, to a high temperature and to an atmosphere charged with what chemists call 'reducing' matters. The evidence for this fact is furnished by three peculiar features shown by specimen 3. These are:—the low percentage of water present; the existence of sulphur in the form of a sulphide, probably an oxy-sulphide; and the grey discoloration which has penetrated deeply from the surface inwards. Here are the percentages of the two analyses of specimens 3 and 9:—

	No. 3	No. 9
Water given off on ignition	13.85	20.46
[of this was given off by long heating at 100° C.]	10.64	17.87]
Silica	2.72	2.16
Ferric oxide and Alumina	0.95	0.55
Calcium Sulphate (Ca SO ₄)	79.96	75.34
Calcium Sulphide (Ca S)	2.13	none
Calcium Carbonate (Ca CO ₃)	0.36	0.85

A cast from pure plaster of Paris would when quite air-dry contain about 80 per cent. calcium sulphate and 20 per cent. water.