100 Quartz = 48·4 Metallic base + 51·6 Oxygen.
100 Felspar = 54 Metallic bases + 46 Oxygen.
100 Mica = 56 Metallic bases + 44 Oxygen.
100 Granite = 52 Metallic bases + 48 Oxygen.
100 Basalt = 57 Metallic bases + 43 Oxygen.

100 Gneiss = 53 Metallic bases + 47 Oxygen.
100 Clay Slate = 54? Metallic bases + 46? Oxygen.
100 Sandstone = from 49 to 53 Metallic bases + 47 to 51 Oxygen.
100 Limestone = 52 Metallic base + 48 Oxygen.*

In studying the simple and various compound mineral masses occasioned by this union of oxygen with the metals and the metallic bases of earths and alkalies, the geologist labours on the same bodies as the mineralogist and the chemist, but not for the same end. To take a well known rock, granite, as an example —

"The geologist considers the circumstances under which this rock occurs in mass or in veins, with a view to determine the agencies which were concerned in its production, the period when it was produced, and other important characters. The composition of the stone is so far a matter of study for him as it helps to clear up these problems.

"To the mineralogist granite is an object of study, because it is composed of certain minerals which are characterised by certain constant properties. It is not granite that he studies, but its constituents, quartz, felspar, and mica. These minerals are investigated by their qualities of geometrical form, specific gravity, hardness, relation to light, electricity, &c. as separate objects.

"Finally, the chemist takes these separate minerals, resolves them into their several ingredients, examines the properties and proportions of them, and investigates the laws of their combination." †

* See on the Chemical Constitution of Rocks, De la Beche's Geological Manual, 2d edit.
† Guide to Geology, 3d edit.