

the same as in sugar. Here a question arises : How does it happen that substances which appear to resemble each other so closely in their composition, should yet differ so widely in their sensible properties? This question we shall soon consider. But in the mean time, we shall make a few remarks on another principle of organized bodies, still very different, in its sensible properties, from the three of which we have spoken, but apparently of a similar constitution. This fourth principle is the *woody fibre*, or *Lignin*, as it is termed by chemists.

The woody fibre, though assuming a great variety of appearances in different plants, and including very different incidental matters; has nevertheless, in all those plants in which it has yet been examined, been found to possess very nearly the same essential composition; or to consist of equal weights of water and of carbon. Such, at least, is the composition of woods, so very different as the Box and the Willow, the Oak and the Beech; and these are the chief, if not the whole, of the woods which, we believe, have yet been analyzed. Hence, it is perhaps not unreasonable to suppose, that every variety of Lignin has a similar composition. All woods, when burnt, leave a greater or less quantity of incidental mineral residuum, in the shape of ashes; the nature of which, as above observed, differs exceedingly in different sorts of wood.

The following Table presents a view of the