

light may be decomposed by absorption. When light falls upon a transparent body, one portion is transmitted through it, another is dispersed by irregular reflection, while a third is stopped, or absorbed, by the substance itself. There are some substances that seem to give an equally ready passage to all the component rays of white light, while others absorb some particular ray in preference to others, as though they had some powerful affinity for it. There are, however, no perfectly transparent bodies, as, on the other hand, there are none that do not possess the property in some degree; both water and air, though they do not retard one ray more than another, absorb a portion of the light that enters them; and the densest metals may be beaten so thin as to give a passage to some portion of an incident ray.

Many philosophers have entertained the opinion that only a part of the seven colours composing the prismatic spectrum are primitive. Dr. Wollaston maintained that there are only four primary colours, red, green, blue, and violet; and Dr. Young enumerates three, red, yellow, and blue; in which analysis Sir David Brewster coincides. The last mentioned philosopher has examined the spectra produced by various bodies, and the changes they undergo when viewed through differently coloured media, and discovered that the colour of every part of the spectrum may be changed by the action of varying media. From his experiments generally, he deduces that the spectrum consists of three equal parts, which are severally red, yellow, and blue.

#### COLOUR OF BODIES.

Colour is not an inherent property of bodies, for any substance may be made to impress the eye variably, according as it is placed in one or the other of the prismatic rays. A body may be yellow in white light, but placed in the red ray it will be red, and in the violet it will be violet, a new colour resulting from a change of circumstances. It will therefore follow, that the colour of any substance will be regulated by the colour of the ray that it reflects. From what has been said concerning absorption, it will be evident that this theory proposed by Newton will, in many cases, readily account for the infinite variety of shades that are observed in nature and artificial objects, resulting from the intermixture of rays one with another, in all possible proportions. But this