

such an examination available, we must become acquainted with the characteristics of the genuine and adulterating articles respectively.

The *Lancet* gives the following hints for attaining this requisite knowledge:—When Black Pepper is diffused through water, little particles, of three different kinds, intermixed with a fine powdery substance, are visible; some of these black, others reddish, and the last white; the black are the fragments of the outer, and the red those of the inner cortex, while the white are the pulverized seed itself. The powder is formed of the cells of the seed, some united in twos and threes, but the majority either separate and entire or broken to pieces, as well as of starch granules of extreme minuteness. In the black particles but little evidence of structure is to be seen; and where doubt is entertained of their nature it is necessary to bleach them with chlorine, and then examine them. In genuine white pepper, no black fragments ought to be seen, but numerous reddish brown particles are always present, usually adherent to the white cells which form the central part of the berry. So great is the quantity of starch in the seed or centre of the berry, that the cells, when touched with a solution of iodine, become deep blue. *Linseed* has two coats; the outer gives polish to the seed; in its cells the mucilage which linseed yields so abundantly is contained; the inner coat has narrow elongated cells. The oil is in the outer particles of the seed, and the starch in the inner. When reduced to meal, these structures, by a little patient investigation, may be detected; the parts most frequently seen, being fragments of the fibrous coats and little masses of starch, the appearances of which can be easily distinguished from the characteristics of pulverized pepper. *Mustard Seed* is readily detected, even when ground into powder. The external membrane is formed of large transparent and nucleated cells; the second is formed of very minute angular cells, containing part of the coloring matter; the third is composed of cells, two or three times larger than those of the second coat. *Rice* is easily distinguished by its colour and the angular form of its particles. *Wheat Flour* and *Pea Flour* are well known, and need no description. In fact, no description of these adulterations can supply the place of experience and close investigation. A useful mode of proceeding, is, to get samples of each kind of the adulterating ingredients most commonly used, ground to meal, and then closely inspect them by the microscope. We may then become more familiar with their characteristic features, so as to be able to detect their presence when in combination with ground pepper.

*To ascertain whether ground pepper be genuine, and of a good quality* the best way is to find the amount of piperine contained in it. This may be