

It might be asked, what was there in the animal phosphate more than in the inorganic phosphate to produce the physiological and therapeutic power. Chemical and other tests being of no avail to discover the power, there must have been some extremely minute division of force located somewhere. Some people have a great abhorrence to the very name of *infinitesimal*, but there must have been power of that character in the animal phosphate, although beyond chemical demonstration.

There are some folks, too, who seem to have their minds so fixed upon the non-divisibility of matter, that they cannot be brought to consider power existing when crude materials are divided, say, into a thousand parts; but the divisibility of matter can be carried much higher than that nevertheless, and the divisions may be seen too. It is a fact that a decigramme of copper dissolved in nitric acid, diluted with water, tinged blue with ammonia, can be divided into fifty billions of visible parts. A decigramme of earmine may be divided into a billion of visible parts. A grain of assafoetida evaporates in eleven millions of parts, all scented well. A grain of musk diffuses an odour for twenty years in the place where the air freely circulates, without apparently losing its weight, and it evaporates in three hundred quadrillionths of parts.

Mayerhoffer believes that the process of trituration is a development of the medicinal powers of drugs. He has found in one grain of tin, of the third trituration, no less than 115,200,000 *divided*, and still further *divisible*, parts. According to his experiments, a grain of precipitated tin can be divided physically into a quadrillion parts; precipitated copper, platina, silver and gold into more than a trillion parts, mercury into a billion, tin and copper foil into more than a billion, *filed or lead foil* and filled iron into a billion, and so on. In these triturations the diameters of the metallic atoms vary from 1-1200th to 1-2000th of a cubic line, and are therefore at least sixty-four times smaller than the blood globules of the human subject, and the least part of any of them may therefore reach the smallest cell for which an affinity exists in the living body.

Ehrenberg has calculated that a cubic inch of a mass of Infusoria contains forty-one billions of these animalculæ.

Several hundred microscopic beings can be held on the point of a needle.

Marsh's apparatus can show the millionth part of a grain of arsenic.

Danger & Flandin have discovered, by their analysis, the hundred thousandth part of a grain of copper in the living organism, and so on, as regards the ultimate divisibility of matter, and as *Cuvier* see—has said, "matter is the depository of strength, matter passes away, but strength remains." I shall now take some cognizance as to *how* divisibilities act on the living body. An English vessel which carried a large quantity of metallic mercury, by accident had some of the metal escaping from the cask in which it was put; in three weeks two hundred men were salivated, ulcers appeared; they were partially paralyzed. Even the lower animals on board were not exempt.

A chemist at Tours had a fit of asthma every time a bottle of powdered Ipecacuanha was opened; another person, each time Ipecac was pulverized in the premises, had an attack of violent vomiting.

A cork impregnated with chloroform has been known to cause sound and refreshing sleep to a person attacked with nervous paralysis.

According to Thenord & Dupuytren, a bird instantly dies in an atmosphere containing the 1,500,000th part of sulphuretted hydrogen gas, and 1,250,000th part is sufficient to kill a horse.

Majendie says that the smallest drop of cyanhydric acid, placed on the mucous membrane of the cheek of strong animals, causes them to fall down stone dead, with no trace of muscular irritability remaining.

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