

19th century textbook illustrations



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Carbon in Nature

“Thus, charcoal, which possesses almost the property of ubiquity, is to be found as the very corner-stone in the fabric of the fairest faces of Eve’s daughters. It lurks in the sweetened cup of tea; and a quarter of a pound of nice white lump sugar put into a breakfast cup with the smallest possible dash of boiling water, and then the addition of plenty of oil of vitriol, is a truly wonderful spectacle, and more instructive than much reading, to see the white sugar turn black, then boil spontaneously, and now, rising out of the cup in solemn black, it heaves and throbs as the oil of vitriol continues its work in the lower part of the cup, emitting volumes of steam, and reminding one of some of those remarkable upheavings of the earth which geologists delight to paint and talk about, till the acid has spent its fury. The elements forming water in the sugar have been attracted, and are now united to the oil of vitriol, a divorce has taken place between the water and the charcoal, which latter now tumbles over the sides of the cup.

In describing this experiment the other state of charcoal (the allotropic condition) must not be forgotten. The breakfast-cup is full of—no! not diamonds!—it only contains a porous sort of black charcoal; and yet, in Nature’s hand, this common black matter is molded into the costly diamond, and,



glancing from the ring on the finger to the solid contents of the cup, it is difficult to trace out any analogy; but this is the point of the argument, and is the nearest approach to the alchemical fantasy of our forefathers.”

Literature Cited

Pepper, J. H., “Scientific Amusements for Young People: Chemistry”, Sower, Barnes & Potts, Philadelphia, 1863, p. 12. appended to “Peterson’s Familiar Science.”