

densed or allotropic form of Oxygen, and that they are mutually convertible, the one into the other, without the production of any other body."

OZONE MAY BE PRODUCED in many ways, though not in a pure and isolated form. Many apparatuses have been constructed for producing it by passing electric sparks through oxygen or atmospheric air. But the formation of ozone by electricity is expensive.

A simple process for generating ozone, Bettger's was given in the *SANITARY JOURNAL* for April.

Lender recommends the use of a powder consisting of equal parts of peroxide of manganese, permanganate of potash and oxalic acid. When diluted with water, ozone is quickly generated.

By the slow oxidation from exposure to air and light of certain ethers and volatile and resin oils, turpentine, linseed, bergamot and most essential oils, ozone is produced.

REGARDING THE PROPERTIES of ozone: It acts powerfully on most substances as an oxidizing agent. Silver, mercury, tin, arsenic and such like metals are oxidized by it. According to Schonbein nitrites are changed into nitrates by ozone only. The property it possesses of destroying most organic substances is remarkable. Its bleaching power is greater than that of chlorine. Experiments of Schonbein and others show that wood, straw, vegetable colors, albumen, starch, caoutchouc, etc., are oxidised by this agent, while it possesses the power of destroying by oxidation the gaseous and other exhalations resulting from the decomposition of organic matter.

The following experiments of Drs. Wood and Richardson forcibly illustrates the deodorizing and purifying powers of Ozone.

"In 1854, a pint of the blood of an ox coagulated was exposed to the air until it was quite putrid, and the clot was softening. At the close of the year, the clot having redissolved as a result of alkaline decomposition, the blood was a most offensive fluid. In 1862, the fluid was found to be so offensive as to produce nausea when the gases evolved from it were inhaled. Drs. Wood and Richardson subjected it to a current of Ozone from Siemens' apparatus. Gradually the offensive smell passed away, and the fluid mass became quite sweet. The dead blood, moreover, coagulated as the products of decomposition were removed, and this so perfectly, that the new clot exuded serum."

The following table by Houzeau shows the chief differences between the properties of Ozone and Oxygen: