

## CHEMISTRY.

*Soft Sulphur.*—Baudrimont has found that fresh soft sulphur left for five or six days in contact with oil of turpentine in a closed tube, becomes opaque and covered with small transparent brilliant crystals, which are also deposited on the sides of the tube. They are modifications of the symmetrical octohedron. This arises probably from the greater solubility of soft sulphur in oil of turpentine—*Comptes Rendus*, *Ap.* 28.

*Carbonic Oxide.*—Grimm and Ramdohr, have found that the Carbonic Oxide gas, prepared by Fownes' process (heating 1 part ferrocyanide of potassium with 9 parts concentrated sulphuric acid,) is not quite pure, containing a small quantity of carbonic as well as of sulphurous acid. It may be perfectly purified by solution of potassa.—*Ann. d. Ch. u. Ph.*, *Ap.*, 1856

*Bone Earth.*—Wöhler has found that bone-dust if left some time in contact with water gives up a certain proportion of the phosphates of lime and magnesia. The same result is obtained if the water be perfectly freed from carbonic acid by long boiling. The quantity dissolved seems to increase, as the organic matter putrifies. This fact is of considerable importance in reference to agriculture.—*Ann. d. Ch. u. Ph.* *Ap.* 1856.

*Pure Silver.*—Wicke dissolves the alloy of copper and silver in nitric acid, precipitates with hot solution of carbonate of soda, boils the precipitate with a solution of grape sugar by which the copper is obtained in the form of suboxide and the silver as metal. The precipitate is treated with a hot solution of carbonate of ammonia, which dissolves the oxide of copper but none of the silver.—*Ann. d. Ch. u. Ph.* *Ap.*, 1856.

*Test for Iodine.*—Liebig recommends the addition of a small quantity of an alkalic iodate, followed by sulphuric or muriatic acid to a solution containing so small a quantity of iodide that no coloration is produced by starch and nitric acid; in this case a much deeper colour is produced. Neither iodic acid nor iodide of potassium produces any colour with muriatic acid and starch paste, The mother liquors of some mineral springs produce the colour without the addition of the iodate; they must contain some substance which acts in a similar manner, possibly nitrates.—*Ann. d. Ch. u. Ph.* *Ap.*, 1856.

*Determination of Chlorine.*—Level has described a method of determining chlorine by means of a normal solution of nitrate of silver, in which he renders the completion of the precipitation perceptible by an addition of phosphate of soda, the presence of an excess of silver being indicated by the yellow tint of the precipitate. This colour being very faint, Mohr recommends the use of chromate of potash, the red colour of the chromate of silver becomes perceptible when a very minute excess of the silver solution has been employed. The chromate and not the bichromate should be used and the solution must not be acid. Mohr has employed the process in the examination of urine, well water, mineral waters, saltpetre, potashes, soda, and chlorate of potash, and always with concordant results.—*Ann. d. Ch. u. Ph.* *Ap.* 97.

*Silvering.*—Liebig has given valuable directions for silvering glass mirrors in the cold, the silvering is effected by a solution of ammoniacal nitrate of silver, excess of caustic potassa and milksugar.—*Ann. d. Ch. u. Ph.*, *April*, 1856, *Ch. Gaz.* 327.

*Furfurine.*—Svanberg and Bergstrand have examined the sulphate, phosphates