

animal tissues, and that it is, in fact, a very strong caustic when concentrated. There is no doubt that many serious accidents have recently occurred from Surgeons not being aware of the properties of the remedy they use so freely. It must also be remembered that the direct application of carbolic acid, even in a diluted form, to a granulating surface, will often delay cicatrization, and tend to promote suppuration, whereas, if it is employed at a distance from the wound, it will tend to diminish the formation of pus. There is moreover, a good deal of evidence to show that it tends to stimulate circulation through the smaller vessels, and thus gives rise to hemorrhagic oozing, from recently cut surfaces, preventing their primary adhesion. If, however, it be properly applied in a diluted form to the wound itself, and in some permanent and non-volatile form to the external parts, it will be found to have a powerful influence in retarding and diminishing suppuration.—*Medical Times Gazette.*

Observations on the Preparation of Strong Hydroiodic Acid in Solution.—(*Bulletin de la Société Chimique de Paris, 1869, No. 2.*)—Since this acid is becoming daily more and more used, M. Ferd. Vigier has studied the best mode of its preparation. It is well known that, for this purpose, a mixture of amorphous phosphorus (as first suggested by M. Personne), iodine and water is gently heated in a tubulated retort to the beak of which a glass tube has been soldered. Vigier has found that too often, in text and handbooks on chemistry, a wrong proportion of the ingredients to be used is given; and after some experiments on this subject, he finds that 1 part of phosphorus, 20 part of iodine, and 15 of water, are the best and only proper to ensure the taking place; these proportions correspond to the formula,

$$P+5I+5HO=PO_5+5HI.$$

On the Cause of a Pink Colour in White Lead Corrosions.—It appears from the experiments of Mr. W. Baker (*Phil. Mag., May, 1869*), that not, as he formerly supposed, oxide of copper, but metallic silver, when present in lead in small quantity, is the cause of the pink colour now and then observed by white lead manufacturers. Analysis of 5.000 grs. of white corrosion gave, CuO, 0.0050; FeO, 0.0022 NiO, trace; Ag, 0.005 per cent. Pink corrosion.—CuO, 0.0060, FeO, 0.0022; NiO, 0.0013; Ag, 0.0058 per cent. A decided colour, which is uniform throughout the mass of the corrosion, is obtained when the silver amounts to about 1½ ozs. per ton. The author ascertained that the silver is present in metallic, but of course finely divided, state.

To Bleach Mucilage of Gum Arabic.—This may easily be done by means of recently precipitated gelatinous alumina, which absorbs the color to itself, and leaves a clear solution. The pure white gum, in a state of powder may then be obtained by adding alcohol to the clear solution as long as any precipitate is formed. It may afterwards be dried in the sun or by a gentle heat. The hydrate of alumina, or the gelatinous alumina, may be easily procured by decomposing a solution of common alum, by an excess of carbonate of ammonia, and washing the precipitate thus obtained until all traces of soluble matters are removed. In decolorizing mucilage, the alumina will generally answer for two operations.—*Jour. of Applied Chemistry.*

Journal of Applied Chemistry.

To Discharge Aniline Colors. A solution of the permanganate of potash in a slight excess of dilute sulphuric acid, thickened with pipe clay, kaolin, or gelatinous silicate will remove the colors produced by the aniline dyes. The small portion of oxide of manganese remaining may easily be removed by a weak bath of sulphurous acid. Powdered zinc has hitherto been used, but has now generally given place to this, which is the invention of M. M. Dangeville and Gutin.—*Ib.*

New Method of Preparing Tartaric Acid.—The wine growers of this country, with their national characteristics, among which is that of being willing to turn everything to good account, may not be averse to adopting the following method for preparing tartaric acid from the pressed skin of the grape, a hitherto waste product. After treating the skins with water and obtaining lees, two per cent of sulphuric acid is added, and the mixture is boiled till the tartaric acid in combination is set at liberty. The action of the acid on the cellulose of the pulp forms a small quantity of glucose, or grape sugar. The liquor after fermentation, is treated with a solution of lime, and the latter subjected to the action of concentrated sulphuric acid, yields sulphite of lime and free tartaric acid. The present high price of this article, (68 to 72 cents per pound) should be an extra inducement for parties who own large vineyards, like those of California, to enter into this important branch of manufacture.—*Ib.*

To Remove Silver Stains.—According to Grim, old silver stains can be bleached by chloride of copper. Wash the spot with hypo-sulphite of soda solution, and afterwards with water. For white stuff, a freshly prepared and very weak mixture of permanganate of potash and hydro-chloric acid, and washing out with hypo-sulphite of soda, is found to be sufficient. Both methods can be recommended on account of their dispensing with the poisonous cyanide of potassium usually employed for the purpose.—*Ib.*

On Bicarbonate of Ammonia as a Pharmaceutical Preparation.—The writer for many years past has used this salt as an antacid in place of bicarbonate of soda, and now brings it forward as deserving the attention of physicians in certain gastric affections wherein its antacid and substituting powers may be indicated, in connection with bitter tonics, aperients, and aromatics.

It is well known to druggists that considerable quantities of this salt are formed on the sides of casks in which carbonate of ammonia is imported; and other portions are derived from the accidental or careless exposure of the sesquicarbonate, whereby an equivalent of monocarbonate is lost. Even in the shop bottles of dispensers, this is constantly going on to a limited extent. It has been usual to reserve the salt thus obtained for forming acetate, nitrate, or other ammoniacal salts, but it has rarely been used medicinally on its own merit. If it were sufficiently abundant, or could be prepared cheaply by a direct process, it would form, by all odds, the best yeast powder that can be offered, as it contains a larger portion of carbonic acid than any of the alkaline bicarbonates, except that of lithia, which of course is unsuited to this use, but it is too scarce for that use. Bicarbonate of ammonia in its purest state is a white salt,

isomorphous with bicarbonate of potassa, and possesses the same crystalline form. Its composition is $NH_3, O \times 2CO_2, HO$. Its taste is saline, with a slightly ammoniacal impression and is slowly volatile when exposed, and gradually evaporates with a slight odor of ammonia. It is soluble in 8 parts of water at 60° F., and its aqueous solution has an alkaline reaction with syrup of violets (Liebig.) It is decomposed by the heat of boiling water, giving off carbolic acid; on this property its merits as a yeast powder partially depend. It is nearly insoluble in official alcohol, but soluble in (1) parts of diluted alcohol. It is most easily prepared in a small way by dissolving out the monocarbonate from the powdered sublimed sesquicarbonate (which consists of one equivalent of each salt) by aid of alcohol (U. S. P. 85 per cent.,) in which the bicarbonate is but slightly soluble. The residue may then, after due washing with alcohol, be dried and used in the pulverulent form. When alcohol is added in excess to a solution of the medicinal carbonate the bicarbonate precipitates in a crystalline form.

When a saturated solution of sesquicarbonate of ammonia in water is saturated with CO_2 , a quantity of the bicarbonate separates in crystals, owing to its less solubility.

The translucent lumps of sesquicarbonate of ammonia, when exposed, lose much weight and the residue is almost entirely bicarbonate. This is the form in which it is most usually met with, and it may be obtained from that salt at any time; but it is too expensive, 100 parts of the official carbonate yielding only about 50 parts of the bicarbonate instead of 59, the theoretical yield. The relative proportions of the potash, soda, and ammonia salts to saturate one equivalent of SO_3 are 100, 84 and 70, so that ten parts of bicarbonate ammonia nearly equal 14½ parts of the potash and 12 of soda salt.—*Pharmaceutical Journal (London).*

Preparation of Pure Chloroform.—Chloroform, as sold, contains many impurities, which render it less efficacious than when pure. Many of these impurities resemble chloroform so closely as only to be recognized by a careful examination. M. Adrian proposes the following processes for the purpose of preparing a perfectly pure anesthetic: It should first be shaken with water, to remove the alcohol, these washings being repeated several times, the complete absence of alcohol being proved by chromic acid and recently prepared binitrosulphide of iron, the former of which is not decomposed, and the latter remains insoluble when the chloroform is quite free from alcohol. The water also removes any aldehyde which may be present. When the chlorine and its derivatives have been for the most part removed by the previous processes, the chloroform is put in contact with a weak solution of carbonate of soda, which saturates the last traces of chlorine, as well as the hydrochloric and hypochlorous acids which may remain in solution. The water retained in solution by the chloroform is removed by digestion, for twenty-four or forty-eight hours, with chloride of calcium; and a considerable quantity of this salt must be used, and the process repeated at several intervals. After this purification the density and the boiling point of the chloroform should be accurately determined. If the