PREPARATIONS

AND

COMPOUNDS.

ACIDS.

Acetum destillatum.

Take of Vinegar (French, by preference) eight parts: distil over with a gentle heat seven parts: dilute the product, if necessary, with distilled water, till the density is 1005.

Acidum aceticum.

Take of Acetate of lead any convenient quantity: heat it gradually in a porcelain basin by means of a bath of oil or fusible metal, (8 tin, 4 lead, 3 bismuth) to 320° F.; and stir till the fused mass concretes again: pulverize this when cold, and heat the powder again to 320°, with frequent stirring, till the particles cease to accrete. Add six ounces of the powder to nine fluidrachms and a half of Pure sulphuric acid

contained in a glass-mattrass : attach a proper tube and refrigeratory ; and distil from a fusible-metal-bath with a heat of 320° to complete dryness. Agitate the distilled liquid with a few grains of red oxide of lead to remove a little sulphurous acid, allow the vessel to rest a few minutes, pour off the clear liquor, and redistil it. The density is commonly from 1063 to 1065, but must not exceed 1068.5

ACIDUM BENZOICUM.

Take of Benzoin any convenient quantity : put it into a glass-mattrass ; and by means of a gradually increasing heat sublime as long as any thing rises : squeeze the sublimate between folds of filtering-paper to remove the oil as much as possible ; and sublime the residuum again.

ACIDUM CITRICUM.

Take of Lemon-juice, four pints ;
Prepared Chalk, four ounces and a half, or a sufficiency ;
Diluted Sulphuric acid, thirty-six fluidounces, or in the same proportion to the chalk required.

Boil the Lemon-juice, allow it to rest, pour off the clear liquor, boil this again, and add the Chalk to it while hot by degrees till there is no more effervescence, and the liquor ceases to taste acid. Collect the

precipitate, and wash it with hot water till the water passes from it colourless. Squeeze the residuum in a powerful press; mix it uniformly with two pints of distilled water; and then add the Sulphuric acid by degrees and with constant stirring. Try whether a small portion of the liquid, when filtered, gives with solution of nitrate of baryta a precipitate almost entirely soluble in nitric acid; and if the precipitate is not nearly all soluble, add a little citrate of lime to the whole liquor till it stand this test. Separate now the clear liquor by subsidence or filtration, washing the insoluble matter with cold water, and adding the washings to the liquor: concentrate with a gentle heat till crystals form on the surface: set the liquor aside to cool and crystallize; and purify the crystals by repeated solution and crystallization till they are colourless.

ACIDUM HYDROCYANICUM.

Take of Ferrocyanide of Potassium, three ounces;
Sulphuric acid, two fluidounces;
Water, sixteen fluidounces.

Dissolve the salt in eleven fluidounces of the water, and put the solution into a mattrass with a little sand: add the acid previously diluted with five fluidounces of the water and allowed to cool: connect the mattrass with a

proper refrigeratory : distil with a gentle heat, by means of a sand-bath or naked gas-flame, till fourteen fluidounces pass over, or till the residuum begins to froth up. Dilute the product with distilled water till it measures sixteen fluidounces.

ACIDUM MURIATICUM PURUM.

Purify Muriate of soda by dissolving it in boiling water, concentrating the solution, skimming off the crystals as they form on the surface, draining from them the adhering solution as much as possible, and subsequently washing them with cold water slightly. Take of this salt, previously well dried, of Pure sulphuric acid, and of water, equal weights. Put the salt into a glass retort, and add the acid previously diluted with a third part of the water and allowed to cool. Fit on a receiver containing the rest of the water. Distil with a gentle heat by means of a sand-bath or naked gas-flame so long as any liquid passes over, preserving the receiver constantly cool by snow or a stream of cold water.

ACIDUM MURIATICUM DILUTUM.

Take of Muriatic Acid, four fluidounces ;
Distilled water, twelve fluidounces.
Mix them together ; the density of this preparation is 1050.

ACIDUM NITRICUM PURUM.

Purify Nitrate of potash, if necessary, by two or more crystallizations till nitrate of silver does not act on its solution in distilled water. Put into a glass retort equal weights of this purified nitrate and of sulphuric acid; and distil into a cool receiver with a moderate heat from a sand-bath or naked gas-flame so long as the fused material continues to give off vapour. The pale-yellow acid thus obtained may be rendered colourless, should this be thought necessary, by heating it gently in a retort.

ACIDUM NITRICUM DILUTUM.

Mix together one fluidounce of Pure Nitric acid (D. 1500), and nine fluidounces of distilled water. If the Commercial Nitric acid of D. 1390 be used, one fluidounce and five fluidrachms and a-half are required.—The density of this diluted acid is 1077.

ACIDUM SULPHURICUM PURUM.

If commercial sulphuric acid contain nitrous acid, heat eight fluidounces of it with between ten and fifteen grains of sugar, at a temperature not quite sufficient to boil the acid, till the dark colour at first produced shall have nearly or altogether disappeared. This process removes nitrous acid. Other impurities may be removed by distillation;

which on the small scale is easily managed by boiling the acid with a few platinum chips in a glass retort by means of a sand-bath or gas-flame,—rejecting the first half ounce.

Acidum sulphuricum dilutum.

Mix together one fluidounce of sulphuric acid and thirteen fluidounces of water. The density of this preparation is about 1090.

Acidum sulphuricum aromaticum.

Take of Sulphuric Acid (commercial,) three fluidounces and a-half;
Rectified spirit, one pint and a-half;
Cinnamon, in moderately fine powder, an ounce and a-half;
Ginger, in moderately fine powder, one ounce;

Add the acid gradually to the spirit, let the mixture digest at a very gentle heat for three days in a closed vessel; mix the powders, moisten them with a little of the acid spirit, let the mass rest for twelve hours, and then put it into a percolator and transmit the rest of the acid spirit. This preparation may also be made by digesting the powders for six days in the acid spirit, and then straining the liquor.

Acidum tartaricum.

Take of Bitartrate of potash, four pounds;

Boiling distilled water, two gallons and a-half;
Prepared chalk, twenty-five ounces and six drachms;
Diluted sulphuric acid, ten pints and seven fluidounces;
Muriatic acid, twenty-six fluidounces and a-half, or a sufficiency.

Boil the bitartrate with two gallons of the water, and add gradually half the chalk, constantly stirring: when the effervescence is over, add a solution obtained by dissolving the rest of the chalk in the muriatic acid diluted with four pints of the water. After the tartrate of lime has subsided, pour off the liquid, and wash the tartrate with distilled water till it is tasteless. Then pour the diluted sulphuric acid on the tartrate, and boil for fifteen minutes. Evaporate with a gentle heat to obtain crystals. Purify these by repeated solution, filtration, and crystallization.