

Nitrate of kali, of each one ounce.

Reduce them separately to powder; and, after mixing them, introduce them into a glass retort, placed in a sand-bath, which is to be gradually heated, until the bottom of the retort become obscurely red. It is expedient to transmit the vapours issuing from the retort, by means of a proper apparatus through distilled water, that the nitrous acid extricated by the heat may be condensed. Dissolve the residuum in four pounds of boiling distilled water; and, after due evaporation, set it aside to crystallize.

THE preparation of the London college is a solution of arsenite of potass, and corresponds with Dr Fowler's tasteless ague-drop. The spirit of lavender is added merely to prevent its being mistaken for water, an accident which might happen from its want of colour and taste. It may also preserve it from decomposition, as stated by Mr Hume. Now that arsenic is so much used, it is useful to have an officinal solution of an uniform strength. Dr Powell has justly observed, that "where the dose is small, and the effects so powerful, the most minute attention to its proportion and preparation become necessary;" a drachm of the solution contains one-half of a grain, and it will seldom be necessary to give above ten minims for a dose.

The Dublin preparation is crystallized arseniate of potass. On the application of the heat, the nitric acid of the nitre is decomposed, the oxygen combines with the oxide of arsenic, and converts it into arsenic acid, which unites with the potass, and nitrous gas and red nitrous acid escape. I should not think the latter of sufficient importance to be condensed, as directed by the Dublin college; especially when we consider the possibility of its being contaminated by arsenic, unless, perhaps, according to the latter supposition, it be intended to preserve the operator from the noxious fumes.

CHAP. VIII.—COPPER.

ÆRUGO PRÆPARATA. Dub.

Prepared Verdegris.

Let the verdegris be ground to powder, and the minute particles be separated in the manner directed for the preparation of chalk.

THE intention of this process is merely to obtain the subacetate of copper in the state of the most minute mechanical division.

SOLUTIO SULPHATIS CUPRI COMPOSITA, olim AQUA STYPTICA.
Ed.

Compound Solution of Sulphate of Copper, formerly Styptic Water.

Take of

Sulphate of copper,

Sulphate of alumina, each three ounces;

Water, two pounds;

Sulphuric acid, an ounce and a half;

Boil the sulphates in the water, to dissolve them, and then add the acid to the liquor filtered through paper.

IN this preparation, the substances dissolved in the water exert no chemical action on each other, and the composition was probably contrived, from the false idea, that the sum of the powers of substances having similar virtues, was increased by mixing them with each other.

Medical use.—It is chiefly used as a styptic for stopping bleedings at the nose; and, for this purpose, cloths, or dossils, steeped in the liquor, are to be applied to the part.

AMMONIARETUM CUPRI, olim CUPRUM AMMONIACUM. *Ed.*
Ammoniaret of Copper, formerly Ammoniacal Copper.

Take of

Pure sulphate of copper, two parts;

Carbonate of ammonia, three parts;

Rub them carefully together in a glass mortar, until, after the effervescence has entirely ceased, they unite into a violet-coloured mass, which must be wrapped up in blotting paper, and first dried on a chalk-stone, and afterwards by a gentle heat. The product must be kept in a glass phial, well corked.

CUPRUM AMMONIATUM. *Dub.*
Ammoniated Copper.

Take of

Sulphate of copper, one ounce;

Carbonate of ammonia, an ounce and a half;

Triturate them in an earthen-ware mortar, until, after the effervescence has entirely ceased, they unite into a mass, which is to be wrapped up in bibulous paper, dried, and kept in a phial, closed with a glass-stopper.

Lond.

Take of

Sulphate of copper, half an ounce;

Subcarbonate of ammonia, six drachms.

Rub them together in a glass mortar, until the effervescence cease; then dry the ammoniated copper, wrapped up in blotting paper, with a gentle heat.

It may seem strange, that particular directions should be given concerning the manner of drying a mixture, which is prepared by rubbing two dry substances together. But such a phenomenon is by no means uncommon, and arises from the quantity of water of crystallization contained in the ingredients being greater than what is required in the new compound formed: As soon, therefore, as the ingredients begin to act upon each other, a quantity of water is set at liberty, which renders the mass moist.

The nature of this compound, and consequently the name which should be given it, are not yet sufficiently ascertained. Prepared according to the directions of the colleges, it evidently contains oxide of copper, ammonia, and sulphuric acid. If these substances be chemically combined, it should be denominated the Sulphate or Subsulphate of copper and ammonia. By exposure to the air during its exsiccation, and by keeping, it is apt to lose its blue colour entirely, and become green, and is probably converted into carbonate of copper. It should therefore be prepared in small quantities at a time.

Medical use.—Ammoniaret of copper has been strongly recommended in epilepsy; but, from its good effects sometimes ceasing after it has been used for some time, a want of success, in some cases, and the disagreeable consequences with which its use is sometimes attended, it has not lately been much prescribed. In my practice, however, its success has been almost uniform and often astonishing. It is employed by beginning with doses of half a grain twice a-day, and increasing them gradually to as much as the stomach will bear. Dr Cullen sometimes increased the dose to five grains.

AQUA CUPRI AMMONIATI. *Dub.**Water of Ammoniated Copper.*

Take of

Lime-water, eight ounces, by measure;

Muriate of ammonia, two scruples;

Verdegris prepared, four grains.

Mix and digest them for twenty-four hours, then pour off the pure liquor.

LIQUOR CUPRI AMMONIATI. *Lond.*
Solution of Ammoniated Copper.

Take of

Ammoniated copper, one drachm ;

Distilled water, one pint.

Dissolve the ammoniated copper in the water, and filter through paper.

IN the Dublin preparation, the lime-water decomposes the muriate of ammonia, and forms muriate of lime ; while the ammonia disengaged, immediately reacts upon the oxide of copper contained in the verdigris, and renders it soluble. The mode of preparing this solution, now adopted by the London college, has the great merit of simplicity ; but, unfortunately, from the large quantity of water employed, one half of the ammoniaret of copper is decomposed, and the oxide is precipitated. Mr Phillips found, that one-fourth of the water used, or even less, was sufficient for the solution of the ammoniaret.

Medical use.—The solution is applied externally for cleaning foul ulcers, and disposing them to heal. It has been recommended also for taking off specks and films from the eyes ; but, when used with this intention, it ought to be diluted with some pure water, as in the degree of strength in which it is here ordered, it irritates and inflames the eyes considerably. It is the readiest, and perhaps the most delicate, test of arsenic, by which its blue colour is converted into green.

CHAP. IX.—IRON.

LIMATURA FERRI PURIFICATA. *Ed.*
Purified Filings of Iron.

Place a sieve over the filings, and apply a magnet, so that the filings may be attracted upwards through the sieve.

THIS process does not fulfil the purpose for which it is intended ; for the adhesion of a very small particle of iron renders brass and other metals attractable by the magnet. The filings of iron got from the shops of different artificers, which are always mixed with solder, and other metals, cannot be purified in this way, so as to render them fit for internal use ; and, indeed, the only way they can be obtained sufficiently pure, is by filing a piece of pure iron with a clean file.