

eau, who, after examining the patient, declined giving a certificate. Two years after the consultation Mrs. H. and her husband left Paris for Naples, where they now reside.

It was mentioned above, that Dr. MacLoughlin had met two law suits. At the first, the Procureur du Roi, requested Dr. Ollivier d'Angers, one of the highest medico-legal authorities here, and author of a valuable work on diseases of the spine, to visit Mrs. H. and to report on her case. Dr. Ollivier did so, and stated in his report to the court that paralysis existed; present at the consultation of the 26th February, 1840, he confirmed his report, but from what then took place, he conceived some doubts as to the accuracy of his opinion, and, therefore, resolved to watch the case. Since then he has published a memoir on simulated diseases, where he admits that he had been deceived by Mrs. Hardern. (*Vide Annales d'Hyg. pub. et de Med. legale*, Vol. XXX. p. 19.)

## MATERIA MEDICA AND PHARMACY.

### ON A NEW PROCESS FOR THE PREPARATION OF LIQUID HYDRIODIC ACID.

BY MR. RICHARD PHILLIPS, JUN.

Wishing to repeat the experiment made by Dumas, of acting upon hydrated sesquioxide of iron by liquid hydriodic acid, I found considerable difficulty in preparing the acid of sufficient strength, by the usual methods, without its undergoing decomposition.

The process, I believe, generally adopted, is to pass a current of hydrosulphuric acid gas through iodine suspended in water, sulphur being precipitated, and hydriodic acid formed. The solution is then boiled, until all excess of the gas is got rid of, and the residue filtered.

It is, according to Berzelius, open to this objection, that, on account of the iodine being but sparingly soluble in water, it is necessary continually to stir the solution, and that even if this precaution be taken, the iodine becomes so mixed with the precipitated sulphur as to remain unacted upon by the hydrosulphuric acid. To this I may add, that when the solution is boiled, to get rid of the excess of the gas, or evaporated, to increase its strength, by the decomposition of hydriodic acid when exposed to the action of the atmosphere, a small amount of iodine is set free, as shewn by the blue colour given by starch to the solution.

In Professor Kane's *Elements of Chemistry*, it is stated, that if dilute sulphuric acid be added to a solution of iodide of barium, sulphate of barytes is precipitated, and hydriodic acid formed. The usual process, however, being to form iodide of barium by acting upon carbonate of barytes, or barytes-water, by hydriodic acid, nothing is gained by the operation. It, however, occurred to me, that I might succeed by adopting the same principle, but varying the process. And my first experiment was to add to a solution of iodide of potassium in alcohol, hydrochloric acid; chloride of potassium, and hydriodic acid were formed, and the chloride being insoluble in the alcohol, was separated by filtration. This method, however, I conceived was objectionable, on account of the difficulty of adding exactly the right proportion of hydrochloric acid, and that from the hydriodic acid acting upon the alcohol, hydriodic ether might be formed. I therefore substituted zinc for the potassium, and oxalic acid for the hydrochloric acid, and these objections were removed. The following was the process:—To 126 grains of iodine mixed with about one fluid ounce of distilled water were added thirty-five grains of zinc turnings. The action was aided by a gentle heat, (care being taken that the mixture was not exposed to atmospheric air,) and when it had ceased, and no free iodine was found to be present, the residual zinc was washed, dried, and weighed. The solution and washings were then evaporated, and with them was mixed for every atom or thirty-two grains of zinc found to have been dissolved by the weight of the residual zinc, one atom or sixty-three grains of crystallized oxalic acid. The mixture was gently heated, and when cold, the precipitated oxalate of zinc was separated by filtration, and the hydriodic acid contained in the solution was found to contain neither oxalic acid, zinc, nor free iodine.

During the evaporation of the iodide of zinc, a slight precipitate takes place; and the solution becomes acid, resulting, as I have before shewn, in the cases of the iodides and chlorides of iron, from water being decomposed, hydriodic acid being set free, and oxide of zinc precipitated. This, however, makes no difference in the accuracy of the process, as the oxalic acid would unite with the precipitated oxide of zinc.

In conclusion I may remark that the advantages of this process would appear to be that by ascertaining the amount of zinc dissolved, not the slightest difficulty arises in adding exactly the proper quantity of oxalic acid to precipitate it, and that from the evaporation of the iodide of zinc, previously to adding the oxalic acid, hydriodic acid of great strength is readily formed.—*Pharm. Jour.*

### ON SOME NEW COMBINATIONS OF IODINE. (1)

BY A. T. THOMPSON, M. D., F. L. S., ETC.

Iodine, it is well known, has an extensive range of affinity; but hitherto, as far as my information extends, its compounds have consisted of its combination with simple substances: thus it combines readily with metals, but manifests little disposition to combine with their oxides, although it forms compounds with oxygen. It also unites with hydrogen, carbon chloride, sulphur, phosphorus, and nitrogen; but I am not aware of any attempts having been made to combine it with organized matters, except some that have been lately made by my assistant, Mr. Blackwell. The nature and extent of his inquiries, I have every reason to believe, will be laid before the Society when they are more matured; my object, at present, is to direct the attention of its members to two iodides, prepared by myself, and to shew them three of the extensive group prepared by Mr. Blackwell.

The two iodides which I have prepared are those of quina and cinchonia, both of which are likely to form valuable additions to the *Materia Medica*, inasmuch as they contain in themselves the combined properties of a most efficient tonic, and one of the most valuable deobstruents which we possess. One of the great objections to the administration of iodine and iodide of potassium is the production of that derangement of the system which is denominated *iodism*, and which has occasionally terminated in death. Now this is likely to be prevented by the tonic influence of the quina or the cinchonia. It is true that we already possess such a combination in iodide of iron, but in many instances, where the influence of such conjoint powers is required, preparations of iron cannot be borne. But my object in bringing these preparations before the Society, is not in reference to their medicinal properties, but to induce such of its members as have more time and opportunity than I can command, to examine their nature and determine their chemical characters.

The *Iodide of Quina* is prepared by triturating together, in a mortar, 164.55 grains of pure quina, and 126.3 grains of iodine; the latter being added to the former, until the whole is intimately mixed; and then boiling the mixture in a moderate quantity of distilled water at first; adding more by degrees, until as much is added as will give one grain of the iodide for each fluid drachm of the solution. During the boiling, a deep brown, resinous-like substance is formed, apparently insoluble in water, which subsides to the bottom, when the solution cools. This substance is brittle, tasteless, inodorous, and affords no indication of the presence of either iodine or quina; it is partially soluble in boiling alcohol. I have not been able to ascertain its nature.

The iodide of quina, in solution, is of a pale straw colour, limpid, evolving a faint colour of iodine, and impressing upon the palate the bitter taste of quina; that it contains no free iodine is evinced by testing it with starch, whilst the existence of the iodine is immediately demonstrated by the development of the deep indigo-blue colour of the iodide of emidine, on adding a drop of nitric acid to the solution containing the starch. The quina in the solution of the iodide is precipitated by infusion of galls, in the form of a tannate; and, in its simple state, when the solution of pure potassa is added to the solution. It is upon these grounds—namely, the existence of both iodine and quina in this compound, that I have been induced to name it *Iodide of Quina*; but the real nature of the salt contained in the solution has yet to be determined; and it is the hope of getting this point settled by those who possess the ability to examine it, and can command more time than is at my disposal, that has induced me to bring it before the Society.

The *Iodide of Cinchonia* is prepared in the same manner as