



Formation of nitre in extract of quassia

M. Planche

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sumed that there was present in the liquor some combination containing more hydrogen than alcohol does; and it is proved by the experiments of Doebereiner that ammonia is formed during fermentation. A solution of chloride of platina produced so abundant a precipitate in the liquor of ammonio-chloride of platina, that the author almost suspected an accidental error. The experiment was then repeated with a certain quantity of alcohol recently prepared from milk; the precipitate was collected on a filter, dried and then heated to redness in a glass tube. The large quantity of muriate of ammonia obtained, left no doubt on the subject in question. M. Hess also determined that the peculiar odour was derived from an admixture of ammonia. Then in order to obtain pure alcohol, he first separated the water by lime and then distilled it with a salt water bath, at a very low temperature, with a few drops of sulphuric acid. The liquor obtained had however a weak æthereal odour; 0.513 gave 0.993 of carbonic acid and 0.596 of water, which give for 100 parts: Carbon .. 53.43 but alcohol contains 52.66

Hydrogen	12.90	12.90
Oxygen..	33.67	34.44

100.

100.

The æthereal odour sufficiently explains the cause of the slight excess of carbon, and it appears, in fact, that the alcohol obtained is identical with common alcohol, but in order to be quite certain of this, M. Hess mixed it with an equal weight of sulphuric acid, and he obtained by distilling the mixture common sulphuric æther. As all kinds of milk are susceptible of fermentation, and as no other kind of sugar but sugar of milk has been discovered in them, these facts prove that it must be fermentable. The author is of opinion that two facts have especially contributed to lead observers into error; first, it is quite possible that the usual ferment (yest) is not sufficiently powerful to decompose sugar of milk, which requires for its decomposition the action of its natural ferment (caseum); secondly, the extreme slowness of the fermentation.—*Journal de Pharmacie*, October 1837.

FORMATION OF NITRE IN EXTRACT OF QUASSIA. BY M. PLANCHE.

The ashes of quassia are slightly alkaline and cold water dissolves about 25 per cent. of them, composed of potash, lime, carbonate of potash, carbonate of lime, chloride of sodium, nitrate of potash, and traces of sulphate. The insoluble residue yielded a little sulphate of potash and of lime to boiling water; the remainder consisted principally of carbonate and sulphate of lime. There are few vegetable ashes which contain so small a quantity of alkali, and the existence of nitre in a product which has been subjected to a red heat is also remarkable.

Not only is nitre contained in the ashes of quassia, but it exists in the extract, and the quantity increases by exposing it to the action of air and moisture. An ounce of extract of quassia (A) recently prepared, and of a consistence fit for pills was put into an earthen

vessel, capable of holding four ounces ; it was furnished with a cover ; it was kept in a place which was perfectly dry at all times. An equal quantity of the same extract (B) was put into a similar vessel covered merely with linen ; this vessel was placed on a stand, at about four feet above the ground in a place used occasionally for distillation, and in which large quantities of water were evaporated, so that the air contained more or less moisture ; in the same place and by the side of the extract of quassia, and in a similar vessel also covered with linen, an ounce of extract of gentian was placed (C), which is well known to contain no nitre. All the vessels thus placed were kept so for a whole year, at the expiration of which the three extracts were examined.

The extract (A) was rather dried and had lost 27 grains, Treated repeatedly for half an hour, with boiling alcohol of sp. gr. 837, it yielded 8 grains of nitrate of potash.

The extract (B) was much softened and had increased 90 grains in weight, it was heated in a salt water bath, in order to restore it as nearly as possible to its original consistence, it was then treated like the foregoing. It yielded $10\frac{1}{2}$ grains of nitrate of potash. Lastly, the extract (C), that of gentian, had increased 38 grains in weight. Submitted to the same treatment as the preceding, it did not yield an atom of nitre.

Thus in the extract (B), which was exposed to moist air, the increase of nitrate of potash was $2\frac{1}{2}$ grains, in the space of a year, whilst the extract (C), which had been placed in the same circumstances, and in which there exists no azotized matter like that of quassia, no portion of nitre was formed. M. Planche concludes that after these results it is difficult not to attribute the newly-formed nitre in the extract of quassia to the azotized matter which it contains.—*Journal de Pharmacie*, November 1837.

METHOD OF DISSOLVING IRIIDIUM. BY M. FELLENBERG.

M. Fellenberg remarks that by Wöhler's method of separating iridium there is obtained a double alkaline chloride of iridium, whereas by his process, which is as follows, a simple chloride is obtained which is very soluble in water. This process is founded on the fact that chlorine converts the greater number of metallic sulphurets into corresponding chlorides.

Iridium, separated from the ore of platina, containing osmium or not, is to be reduced to the finest powder in an agate mortar ; upon this, the success of the process mainly depends. This powder is then to be mixed with three times its weight of flowers of sulphur, six times its weight of carbonate of potash or dry carbonate of soda, then heated in a well closed porcelain crucible, and kept in a strong red heat till no vapour of sulphur or of sulphurous acid is perceptible. When the crucible is cold, the mass, which is of a black-brown colour, is reduced to powder, and washed with boiling water till it ceases to produce any effect upon a solution of lead. The sulphuret of iridium is easily separated from the liquor by simple decantation ; it is then to be thoroughly dried and reduced to a fine powder.

This is to be placed in a tube with a bulb, which is to be con-