

SELECTIONS.

A simple way for testing limewater is given by Mr. Barnard S. Proctor, which is as follows:—Color 2 fluid oz. of lime-water with a few drops of tincture of litmus and add a solution of 2 grains of oxalic acid, when a white precipitate of oxalate of calcium falls in the solution, which should retain its blue color. Should the tint be red the lime is deficient.

Solidified Petroleum.—Considerable attention has lately been given to the details of a process, by which petroleum can be converted into bricks, which, although hard enough to be handled without inconvenience, are yet soft enough to be cut with a knife. They burn slowly when touched with a lighted match, and are non-explosive and inexpensive. The inventor, Professor De Milie Fleurs, claims the idea as the result of an extended series of experiments.

Extemporaneous Hydrochlorate of Quinine.—Weld gives the following method for the extemporaneous preparation of quinine hydrochlorate, in the *Pharmaceutische Post*: Boil sulphate of quinine for ten minutes in a closed flask along with alcohol and common salt. Concentrate the solution, and let cool. The sodium sulphate formed by decomposition, and the sodium chloride in excess, will be deposited. Decant the liquor, and continue the concentration, when the quinine hydrochlorate will crystallize out.

Gelatinous Bottle Wax for Covering Corks.—In storing volatile liquids which are solvent of resinous material, the ordinary bottle wax in which bottle necks are commonly dipped is generally inadmissible by reason of this solvent action of the liquid upon it. In such cases the following answers admirably, giving a perfect closing; and, moreover, the top is easily pared off with a knife when the bottle is to be opened:

Soft Gelatin or good Glue .. 3 parts.
Water 9 "
Glycerin 2 "

Melt the gelatin in the water and then stir in the glycerin. Any coloring matter can be added, and the bottle necks should be quite free from grease. A second dip can be given if requisite, and the top can be stamped while soft with a slightly greased metal seal, or warm stereotype (slightly oiled), or an india-rubber stamp.—*Photo-Review*.

Sulphonal.—The high price at which sulphonal was first introduced is still being reduced. Manufacturers are vying with each other as to who shall offer it at the lowest figure and so secure the trade in the article. Somewhat in the style of a "clearing-out-at-great-reductions" sale, sulphonal is listed in druggists' prices current at 13s. 6d. a lb., "cheaper in larger quantities!" This is a remarkable reduction from the 90s. a lb. of two years ago. Altogether the

rivalry of the various sulphonal and phenacetin manufacturers is amusing. One will insinuate in his advertisements that the others make "spurious imitations, whereupon his competitors proceed to strenuously combat the aspersion. If the two products had been patented much heart-burning and ill-feeling would have been prevented among chemical manufacturers. However, the competition continues, so that it would seem that the preparation of the remedies pays at any price.—*Berlin Cor. to Chemist and Druggist*.

Iodized Cotton.—Messrs. Breaudat and Catilmeau, in the *Repertorie de Pharmacie*, give the following improved method of preparing this useful article. They take sheet cotton-wool of medium thickness and plunge it for a few minutes in a two per cent. solution of carbonate of soda. It is then washed, pressed and immersed for half an hour in a four per cent. solution of chlorinated lime. This is followed, after washing, by immersion in a five per cent. solution of hydrochloric acid. It is again washed and dried. Upon the surface of each sheet powdered iodine is now sprinkled in the proportion of eight parts to every one hundred parts by weight of the wool. The vessel rolled up without shaking and put lengthwise into a wide-mouthed stoppered bottle, so as to completely fill the vessel. It is then gently heated until iodine vapors begin to escape, when the stopper is firmly secured, and the bottle is placed on a water-bath. After keeping at this temperature for two hours, it is allowed to cool slowly; when cooled the iodine will be found to be completely absorbed.

Delicate Balances.—The balances used in the mints in the time of Queen Elizabeth, and for two centuries before, indicated to the extent of about 1 part in 10,000. The balance which Mr. Harris, of the London Mint, used in 1743 indicated $\frac{1}{8}$ of a grain on a troy pound, or about 1 part in 50,000. Fifteen years later he had a balance which turned with 1-230,000 part of its load. In 1798 Sir George Shuckburgh had a balance sensitive enough to indicate 0.01 of a grain when loaded with 16,000 grains, or about 1 part in 1,600,000. The balance used by Fortin in 1799 in adjusting the kilogramme of the Archives, was not quite so delicate, its sensitiveness being only the 1,000,000th part of its load; but in 1844, for the adjustment of the present English standard pound, Professor Miller employed a balance whose index moved about 0.01 of an inch for a change of 0.002 of a grain in a load of 7,000 grains. He read the index with a microscope, and found the probable error of a single comparison of two avoirdupois pounds to be 1-12,000,000 of either, or about 0.00058 of a grain. At the present time it is claimed that two avoirdupois pounds can be compared with an error not exceeding 0.02 of a grain, and two kilogrammes with an error not exceeding 0.02 of a milligramme.—*Chemist and Druggist*.

Soluble Essence of Ginger.

Some three years ago my attention was directed to this essence, and I commenced operations by an examination of the various soluble essences of ginger put forward by numerous makers, and although satisfied that there were some good individual points in most of the samples examined, yet there were but two which could be said to bear any approach to my idea of what a really good soluble essence of ginger ought to be.

In the outset I, therefore, laid down what I considered should be the governing points of my work

- 1 That the "essence" should be as strong as possible compatible with its solubility
- 2 That it should possess the fine aroma peculiar to Jamaica ginger
- 3 That it should be perfectly free from capsicum. And now, after a long series of experiments, extending over a period of two years, I have at last succeeded in producing from the following formula a soluble essence of ginger quite equal to anything at present on the market

WORKING FORMULA.

Ginger, in coarse powder	1 lb. 8 oz.
S.V.R. 60 per cent	2 pints 5 oz.
Water	15 oz.
	3 pints.

These are to be frequently shaken together for ten days, then percolated, pressed off, and filtered, yielding 45 fl. oz. This is "not to be made up" to 60 fl. oz., but worked from as it stands.

Take of the above tincture 40 fl. oz., water 40 fl. oz., and mix; $\frac{1}{4}$ oz. phosphate of soda, dissolved in 5 oz. boiling water and allowed to cool, is next added, shaking the mixture; $\frac{1}{4}$ oz. fused chloride of calcium dissolved in 5 oz. nearly cold water, and added; the whole to be again well shaken; allow to stand twelve hours, and filter.

Introduce the filtered solution into a still and distil off, at a very low temperature, 30 fl. oz. first, which put on one side in bottle for further use.

Distil then a further quantity of 40 fl. oz., and allow the still to cool.

The residue in the still, which will be about 18 fl. oz., is what we require. This must now be carefully got out by rinsing the still with the 30 oz. first drawn over. This takes up all that is essential. Filter once more through double-paper filter, and the product is 40 fl. oz. of a fine amber-coloured essence almost entirely soluble in water.

I trust the above will be found acceptable as a step towards elucidating that which hitherto seems to have been shrouded in a sort of mystery.—*Chemist and Druggist*.

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