

## Extract of Licorice.

BY P. W. BEDFORD.

The pharmacist is at times at a loss to know just which is best to purchase of the many varieties of this article which are to be had at present. The U. S. P. recognizes under the above title any commercial extract which yields not less than 60 per cent. of matter soluble in cold water. This then permits the presence of 40 per cent. of other material, including moisture. As the U. S. P. does not direct any preparation to be made containing this variety of extract, why should it remain in that work? If it is a commercial article only, as it is defined, and there be no better method of describing it than what proportion of it is soluble in water, why should it be recognized at all by this volume?

Licorice root, as it enters into commerce, is mainly obtained from the Mediterranean basin, that which comes from western half, Italy to Spain, having a sweeter taste than the Greek or Turkish, which comes from Greece and Asia Minor. What is known as Russian or Crimean is mainly decorticated, and as the bitterness is usually confined to the bark of the root, this variety does not possess the bitter taste alluded to. This variety is not, however, used for making the extract, as the labor of decortication adds too much to the expense.

The manufacturers of licorice extract in stick must either obtain a very large proportion of insoluble matter from the root, or else retain it in presentable form by adding some material which will absorb the moisture and hold the extract in cylindrical rolls. There are several methods of accomplishing this: Superheated steam or steam under pressure removes the starch in a temporarily soluble form, the addition of dextrin, starch, and various inert vegetable substances will answer the purpose, and to keep up the color it is even asserted that lamp black is called in to aid in the deception. In the cheaper kinds that are offered, molasses, cheap commercial extracts, as of chestnut, quercitron and others, are known to be used, and the true extract of licorice suffers in proportion to the price that is to be expected for the product.

It is also known that there are to be purchased some varieties of what is known as mass or paste licorice, which are quite pure and might well be substituted for the more expensive extract glycyrrh. porum of the U. S. P. for the only purpose for which that volume calls for its use, viz., mist. glycyrrh. comp., a relic of the past, which might better be in the National Formulary, if it is to be retained anywhere. (In view of the unreliability of the spirit of nitrous ether being of any value whatever in this preparation, why should not this be left out of its composition?) This mass of paste licorice, to be sure, is also liable to be found on the market of a variable character as to purity, but it can be had of some brands which are very reliable and excellent. The tobacco manufacturers understand this

question apparently better than the pharmacists, and as they are the largest consumers of extract of licorice, are pretty apt to be posted as to quality of mass licorice. It is generally supposed that the test of producing "ammoniated glycyrrhizin" from the extract or paste licorice would be a good indication of its value, but it would seem that some of the adulterants of this will also yield a precipitate with acid and so vitiate results. This might with advantage receive some careful consideration from the revisers of the U. S. P. and other investigators of a chemico-pharmaceutical turn, and we suggest that some more reliable tests if available would be exceedingly desirable. From licorice root the production of ammoniated glycyrrhizin would be practicable and reliable, but the extract or mass licorice is a very variable product, and unless there be some method of identifying the ammoniated glycyrrhizin and isolating it from other matters that may be precipitated by acid, we shall need a new departure for a reliable test. Meanwhile it would seem that quality is better insured by the integrity of the manufacturer than by some tests which lack reliability. — *Pharm. Record.*

## Saccharinated Preparations.

Paschke, in Heft IV of *Zur Frage der Unschadlichkeit des Saccharins*, gives the following formulae for the use of saccharin in medicine and pharmacy:

### 1. Simple Solution of Saccharin, to replace simple syrup.

Soluble saccharin . . . . . 18 parts.  
Water . . . . . 2,500 parts.

Mix and dissolve.

### 2. One per cent Solution of Saccharin.

Pure saccharin . . . . . 10 parts.  
Sodium bicarbonate . . . . . 5 parts.  
Distilled water . . . . . 1,000 parts.

Mix and dissolve. Ten parts of this solution correspond to 25 parts of sugar.

### 3. Saccharinated Syrup of Rhubarb, to replace syrup of rhubarb.

Rhubarb, in powder . . . . . 250 parts.  
Sodium carbonate . . . . . 5 parts.  
Soluble saccharin . . . . . 18 parts.  
Distilled water . . . . . 3,000 parts.

Proceed as in making syrup of rhubarb.

### 4. Saccharinated Syrup of Bitter Orange Peel.

Tinct. of bitter orange peel . . 10 parts.  
Simple sol. of sacch. (No. 1) . . 70 parts.

Mix.

### 5. Saccharinated Syrup of Senna and Manna.

Senna leaves . . . . . 250 parts.  
Star anise leaves . . . . . 20 parts.  
Manna . . . . . 1,000 parts.  
Soluble saccharin . . . . . 18 parts.  
Distilled water . . . . . 2,500 parts.

Mix. Proceed as in syrup of senna and manna.

### 6. Saccharinated Emulsion of Almonds.

a. Sweet almonds . . . . . 350 parts.  
Soluble saccharin . . . . . 7 parts.  
Distilled water . . . . . 2,500 parts.

Mix.

b. Sweet almonds . . . . . 800 parts.  
Bitter almonds . . . . . 200 parts.  
Soluble saccharin . . . . . 15 parts.  
Distilled water . . . . . 2,000 parts.

Mix.

### 7. Saccharinated Almond Powder.

Sweet almonds . . . . . 600 parts.  
Powder of gum arabic . . . . 80 parts.  
Saccharin . . . . . 1 part.

Mix.

### 8. Mixture of Saccharinated Almonds.

Saccharinated almond powder 10 parts.  
Distilled water . . . . . 105 parts.

Mix. This mixture is preferable to the emulsion b (No. 6.)

### 9. Saccharinated Dover's Powder.

Dover's Powder . . . . . 100 parts.  
Gum arabic, powdered . . . . 400 parts.  
Soluble saccharin . . . . . 2 parts.

Mix.

### 10. Saccharinated Compound Licorice Powder.

Powdered senna leaves . . . 100 parts.  
Powdered licorice root . . . 100 parts.  
Fennel . . . . . 50 parts.  
Flowers of sulphur . . . . . 50 parts.  
Soluble saccharin . . . . . 2 parts.

Mix.

## Brains in Business.

A writer in *The Office* says: One great secret of success in business—the secret, in fact, of success on a large scale—is to conceive of it as a matter of principles, not merely as a series of transactions. There are great merchants as there are great statesmen, and there are small merchants as there are small politicians, and the difference between the great and small men is very much the same in both. The small politician works by the day, and sees only one opportunity before him; the small merchant does the same thing—he is looking for the next dollar. The statesman on the other hand, is master of the situation because he understands the great principles which control events; this knowledge enables him to deal with large questions and to shape the future.

The great merchant does the same thing. His business is not a mere money-getting affair, not a mere matter of barter, but a science and an art; he studies the general laws of trade, watches the general condition of the country, investigates present needs, foresees future wants, and adapts his business to the broad conditions of his time and place. He puts as much brains into his work as does the statesman, and he ends by being not a money-getter, but a large-minded and capable man.

An eminent successful man of the statesmanlike quality said the other day that the more he understood of life, the more clearly he saw it was all done on business principles; by which he meant not only that the universe is governed by unvarying laws, but that promptness, exactness, thoroughness and honesty are wrought in every fibre.

On these business principles all life is conducted—if not by men, at least by that Power which is behind man. It ought to be the ambition of every young man to treat his business from the point of view of the statesman, and not from that of the politician.