

the red coloring was readily produced by neutralizing with citric acid. The use of an extract of cudbear would very materially reduce the variability in color of preparations in which it was used and it would also be available for the preparation of a more uniform tincture. Acetic acid extract is ruled out on account of its poor solubility and lack of strength. On the score of economy ammonia water extraction appeals but on the basis of strength and reliability alcoholic extraction is to be preferred.

THE DRUG MARKET.

HARRY B. FRENCH.

Senna Leaves.—The United States government is refusing admittance into the United States of what is known as Alexandria Senna Siftings. This is supposed to be the small leaves sifted out in obtaining whole leaf and half leaf garbled. These siftings are very often of good quality, but contain a large portion of sand and other foreign matter. We understand that the Government's limit of foreign matter and succeeded in reducing the percentage of extraneous matter to 9 per cent. was sifted by us. The result was that we eliminated about 25 per cent. of foreign matter and succeeded in reducing the percentage of extraneous matter to 9 per cent. ash. This necessarily makes the price higher to the buyer, but he secures a better article. Ash insoluble in hydrochloric acid less than 1 per cent.

Opium.—Some time ago, we bought in Smyrna, dried opium of high test. This was sold to us as 22 per cent. On arrival we had it carefully tested and had this test corroborated by a prominent chemist in the city and the gum also is tested, at our request, by one of the very large manufacturing chemists in the city. The average result obtained was that the gum tested 20 per cent. U. S. P. Sample was also tested, as a favor to us, by a very prominent pharmaceutical house in the west, and they made the following very interesting report to us:

*“Report on Sample of Dried Opium from Smith, Kline & French Co.
Laboratory No. C-3892.*

“It is well known that there are several sources of error in the U. S. P. Opium assay, and also that other methods are not free from similar sources of error. One of the most fruitful sources of error is the difficulty of completely extracting the Opium and this varies with different samples of Opium, some being much more easily extracted than others. As the morphine is determined by the crystallizing out of a solution, a certain amount will be retained in the mother liquors and this amount will also vary with the character of the Opium. Another source of error is found in the impurities which may be weighed with the Opium, and here again the purity of the morphine is influenced by the character of the Opium. The above facts must be borne in mind by the comparing assays made upon any sample of Opium.

“In order to determine as accurately as possible the morphine content of this Opium, we have made 15 assays; 6 by the U. S. P. method and 9 by other methods. Our results may be summarized as follows:

“Adhering closely to the U. S. P. method, we have found an average morphine content of 20.2 per cent. Applying to these results corrections for the solubility

of morphine in the mother liquors, the average would be raised to about 21 per cent.

"Our average result obtained by other methods, where lime was used in extracting the Opium, was 22.8 per cent morphine. In our opinion, this result is nearer the true morphine content of the Opium than that obtained by the U. S. P. process, but we do not believe that any such result as this can be obtained by the U. S. P. method."

Trouble is apt to arise in buying Opium on test from foreigners unless it is distinctly understood that the only standard that will be accepted will be the U. S. P. test. Whatever results may be given by other tests, the only test of importance to buyers in this country is the test of the U. S. Pharmacopoeia.

Gum Arabic Sorts, which is used in very large quantities, is gathered in the vast district around Khartoum and it has been customary to bring in this gum by the various methods of conveyance that were available to the natives. It was largely transported on the backs of camels and taken to some port of shipment, being delivered chiefly to the Port of Soudan on the Red Sea. The consequence of this method of delivery was that gum was being constantly delivered over a period of many months. A railroad was recently completed from Khartoum to Port Soudan, and this year the gum was shipped from Khartoum by rail. The consequence was that the bulk of the crop of gum was all delivered within a comparatively short time. This was a new experience in the commercial history of the world. The result was that the tremendous deliveries of gum within a short time forced down the price to a lower range than was justified. In previous years the gum would have been arriving at the port of shipment up to the end of July in considerable quantities. As the large deliveries have been absorbed and the later arrivals have been much smaller, for the reasons given above, the price is advancing rapidly.

The early sales of Gum Arabic are apt to be the best. Photographs show the gum, before it is bagged, piled up like large hills. The sand, and fine stuff, which is of little value, is very apt to sift to the bottom, and consequently the first orders are apt to be cleaner than those that are filled later.

Quinine.—After the manufacturers' price had remained at 14 cents in quantity of 100-oz. cans for a number of years, the price was jumped to 16 cents per oz., and shortly afterwards to 19½ cents per oz. These advances were due to decreased shipments from Java, and these decreased shipments resulted in much higher prices being obtained for bark when offered at auction in London, Amsterdam and other quarters. We understand these decreased shipments were not due to any decreased production, but to a combination among the planters to restrict their shipments in order to secure higher prices for the bark. We have a suspicion that in doing this they are acting in conjunction with some of the larger European manufacturers.

It is doubtful whether these higher prices will be permanently maintained, as the shipments have begun to greatly increase and assume even larger proportions than before the recent decrease in the quantities forwarded. It is human nature for a certain percentage of those who may have agreed together to restrict shipments to take advantage of their more honest associates. When these delinquent

cies are discovered the floodgates are loosened and the quantity shipped is largely increased.

Buchu Leaves.—The very high prices prevailing for Buchu Leaves during the last three years constitute a matter for wonder. The production does not seem to be greatly decreased. It is true that the British Government now levies a tax on crown lands where most of the short leaves grow, but this tax constitutes only a small percentage of the advance in the price. The advance must be due to either increased consumption or expert manipulation of prices; possibly both reasons play a part.

We understand that the next U. S. Pharmacopoeia will probably make the long Buchu Leaves official, as well as the short leaf. If, as we have been told, the long leaf is not so valuable medicinally as the short leaf, then the wisdom of such action may be questioned. Owing to the difference in the prices prevailing between the long leaf and the short leaf, some manufacturers are not waiting for the sanction of the Pharmacopoeia, but are turning an honest (?) penny by using the long leaf instead of the short leaf for manufacturing purposes.

Oil of Rose.—The price of Oil of Rose has taken to aviation. The normal price for the best quality was about \$6 to \$7 per oz. The present asking price from abroad for best quality is about \$17 per oz. This latter price, however, is really intended to check buying until it can be ascertained how much Oil of Rose will be produced and at what cost.

For generations the sturdy farmers of Bulgaria sold their rose leaves for 2 cents per pound, and owing to this low cost, the manufacturers of Oil of Rose were able to supply fine quality at low prices. Last year some wicked men, inoculated with poisonous ideas of benefiting the common people, circulated among the Bulgarians and suggested to them that they could get 4 cents per pound for rose leaves as well as 2 cents per pound. They listened to the suggestion of the serpent and found that they could get the higher price. When people of this character once get the taste of a profit of this kind, it leaves a pleasant flavor and they are apt to bear it always in mind. The consequence is that probably the Bulgarian peasant will always hereafter ask a considerably higher price for his rose leaves than heretofore, and such is the weakness of human nature that he will probably persist in endeavoring to obtain still higher prices.

Because of the good price obtained last year, the amount of roses cultivated was greatly increased. We are told, we do not know with how much truth, because of this increased area that was planted and the consequent despoilation of the best rose bushes for planting, the production of the best bushes for the present year was, to some extent lessened. The last reports are, notwithstanding the increased acreage, the outcome would be not more than last year, and perhaps less. Some time ago Bulgaria had very cold weather and this was followed suddenly by very warm weather. This caused the leaves to fall from the plant. In the meantime, the demand is said to be growing. If extreme prices are reached this article will no doubt be heavily adulterated, and as it is well known, it is an article that is especially susceptible to adulteration. It appeals to men's imagination as an easy road to obtain somebody's else cash. Notwithstanding our advance in moral education over our fathers, still there are a remnant of

us in Israel who are still willing to make use of sharp tricks to increase our returns. For instance, as it is known, celery seed is now selling at a phenomenally high price owing to the short crop of last year. We received recently a report from a correspondent who has headquarters in the principal cities of Europe to the effect that a quantity of celery seed had recently been sold for export to the United States at very high prices, 25 per cent of which celery seed was composed of foreign matter or exhausted seed. But then, the Americans are rich and can afford to pay for such little pleasantries.

In this connection the following extract from the Perfumery and Essential Oil Record of June 26, 1912, is of interest:

"We are now beginning to receive supplies of new season's otto of rose, and we must confess to disappointment at the samples that we have so far received. The following are the characters of the best of the few samples that we have had so far, which, although fairly good, yet unquestionably contained alcohol:

Specific gravity $\frac{300}{15}$	0.8564
Optical Rotation	-C° 30'
Refractive Index	1.4588
Refractive after drying.....	1.4598
Refractive after washing and drying.....	1.4630
Melting point	20-31° C.

"Other samples furnished to us have been of the very poorest character, flagrantly adulterated, some of them to the extent probably of 40 to 45 per cent."

Cod Liver Oil.—This is subject to great variations in price. Some years ago there was a great shortage and manufacturers of established proprietary remedies using Cod Liver Oil paid as high as \$110 per barrel. There is a suit recently instituted in Boston against one of these manufacturers for his refusing to accept delivery on account of a contract for Cod Liver Oil during this period. It was shown that some of the oil was seal oil, much of the so-called Cod Liver Oil was put up in old barrels that formerly contained various kinds of oil, and that much of the oil came from other places than Norway. In other words, the seller was trying to make "hay while the sun shone."

The production this year of Cod Liver Oil has been enormous, about twice as great as in the previous years, and is, we believe, the largest output on record. When oil is quoted at \$14 in Norway, it costs about \$20 here, including the duty. The refiners of oil are seldom willing to sell below \$14 F. O. B. Norway, as they claim they can utilize the oil to better advantage by selling the crude Cod Liver Oil.

SMITH, KLINE AND FRENCH CO., PHILADELPHIA, JUNE 28, 1912.