

THE  
COMPOSITION OF SOME PROPRIETARY  
FOOD PREPARATIONS.

II.—TONIC WINES.

In addition to the meat wines already dealt with, a large number of medicated wines are advertised and sold for employment as tonics in convalescence after illness and at other times. The particular medication employed, whether cinchona, coca, phosphates, or some other, is mentioned on the label or in advertisements in most cases, but not in all. Analyses have been made of a number of these wines, and the results are here given; there is no reason to suppose that others differ greatly from those described.

Following the usual analytical practice in regard to wines, the volatile acid has been calculated as acetic acid, and the non-volatile as tartaric. The reducing sugar has been calculated as glucose, and the presence of this substance has been qualitatively proved in each case by formation of the osazone.

Liquid extract of coca contains a variable proportion of alkaloid, the average being about 0.4 per cent. The quantity of an extract of this strength which corresponds to a dose of the wine has been calculated for the first three wines; in the fourth the identity of the trace of alkaloid found was not sufficiently certain; and in the fifth it was not possible to say how much of the alkaloid was derived from coca and how much from cinchona.

Liquid extract of cinchona (*B.P.*) contains 5 per cent. of alkaloids, not less than half of which consists of quinine and cinchonidine. The quantity of this extract which corresponds to a dose of the wine has been calculated for those wines which contained cinchona alkaloid, except in the case in which quinine was practically absent.

ARMBRECHT'S COCA WINE.

Several varieties of this wine are supplied by Armbrecht, Nelson, and Co., Duke Street, Grosvenor Square, London, W.; the one taken for analysis is described as Coca Port. The price of a bottle holding 21 fl. oz. is 4s. The dose is one wineglassful before or with each meal.

Analysis showed that 100 parts by measure contained:

Alcohol ...	15.05 parts by measure.
Total solids ...	23.5 parts.
Glucose ...	20.8 "
Ash ...	0.28 "
Acidity, volatile ...	0.08 "
" fixed... ..	0.34 "
Alkaloid ...	0.006 "

The alkaloid caused numbing when applied to the tongue and agreed in other properties with the alkaloid of coca. A wineglassful of the wine would represent about 14 minims of liquid extract of coca.

SAVAR'S COCA WINE.

This wine is supplied wholesale at Bartholomew Close, London, and Hanover Street, Liverpool. No maker's name is given on the label. The price is 4s. a bottle holding 10 fl. oz.

Dose: A dessertspoonful in half a wineglass of water or wine before meals; after several days this may be doubled.

Analysis showed that 100 parts by measure contained:

Alcohol ...	23.40 parts by measure.
Glycerine ...	6.1 parts.
Total solids ...	5.4 "
Glucose ...	2.6 "
Ash ...	0.44 "
Acidity, volatile ...	0.13 "
" fixed... ..	0.24 "
Alkaloid ...	0.07 "

The alkaloid caused numbing when applied to the tongue, and agreed in other properties with the alkaloid of coca. A dessertspoonful of the wine would represent about 21 minims of liquid extract of coca.

MARIANI'S TONIC COCA WINE (VIN MARIANI).

This wine is supplied by Mariani and Co., Paris, in bottles holding 17½ fl. oz. and costing 4s.

Dose: One claret glass full before or after the principal meal.

Analysis showed that 100 parts by measure contained:

Alcohol ...	16.40 parts by measure.
Total solids ...	8.9 parts.
Glucose ...	2.0 "
Cane sugar ...	4.9 "
Ash ...	0.22 "
Acidity, volatile ...	0.10 "
" fixed ...	0.35 "
Alkaloid ...	0.01 "

The alkaloid caused numbing when applied to the tongue and agreed in other properties with the alkaloid of coca. A wineglassful would represent about 24 minims of liquid extract of coca.

HALL'S WINE.

This wine, supplied by Stephen Smith and Co., Ltd., Bow, London, E., is in bottles, price 1s. 9d. and 3s., holding respectively 11½ and 21 fl. oz.

Dose: Adults—wineglassful thrice daily.

This wine appears to be now advertised and sold simply as Hall's wine, and neither on the label nor on the circular enclosed in the package is any reference made to coca, but on the carton are the words "Recommended by the *Lancet*, April 9th, 1892." Reference to this recommendation showed that it dealt with "Hall's Coca Wine," and stated that cocaine could be readily extracted from the wine and identified, and also that "a wineglassful is stated to contain one drachm of the soluble active ingredients of the leaves" of coca. Our results show that the wine now sold is of very different composition.

Analysis showed that 100 parts by measure contained:

Alcohol ...	17.85 parts by measure.
Total solids ...	14.1 parts.
Glucose ...	11.9 "
Ash ...	0.29 "
Acidity, volatile ...	0.10 "
" fixed ...	0.34 "
Alkaloid ...	0.003 "

The total quantity of alkaloid extracted from over half a pint of the wine barely sufficed to cause any appreciable numbing when applied to the tongue.

MARZA WINE.

The agents for this wine are Wright, Layman, and Umney, Ltd., Southwark, S.E. It is sold in bottles, holding 24 fl. oz., price 3s. 9d. Dose: A wineglassful three times daily, before or after food.

This is described on the package as "containing iron, phosphorus, coca, and pepsine."

Analysis showed that 100 parts by measure contained

Alcohol ...	17.48 parts by measure.
Total solids ...	9.4 parts.
Glucose ...	7.6 "
Ash ...	0.23 "
Acidity, volatile ...	0.11 "
" fixed ...	0.30 "
Alkaloid ...	0.001 "
Iron ...	0.005 "
Phosphorus in combination, calculated as phosphoric acid ...	0.03 "

No free phosphorus could be detected. The alkaloid was bitter, and caused numbing when applied to the tongue. Although so small in quantity, its solution showed the fluorescence characteristic of quinine or quinidine.

No digestive action on egg albumen could be detected in eight hours, after removing the alcohol from the wine at a low temperature.

CHRISTY'S KOLA WINE.

This wine is supplied by Thos. Christy and Co., Old Swan Lane, London, in bottles, price 3s. 6d., holding 12½ fl. oz.

Dose: A liqueur glass, or one ounce, occasionally.

It is stated on the label that each ounce contains the equivalent of 30 grains of kola.

Analysis showed that 100 parts by measure contained:

Alcohol ...	18.85 parts by measure.
Total solids ...	10.9 parts.
Glucose ...	8.6 "
Ash ...	0.25 "
Acidity, volatile ...	0.09 "
" fixed ...	0.24 "
Alkaloid ...	0.03 "

The alkaloid showed the characteristic reactions of caffeine, which is the alkaloid of kola. According to published statements, kola nuts contain 2 to 2½ per cent. of caffeine; taking the lower of these figures, 0.03 part of caffeine would represent 1.5 part of kola, or 6½ grains to each fluid ounce of the wine.

#### VIBRONA.

This preparation is supplied by Fletcher, Fletcher, and Co., Ltd., Holloway, London, N., in bottles holding 20 fl. oz., price 3s. 9d.

Dose: A liqueur glass (about one tablespoonful).

In a circular enclosed with the bottle it is stated:

To the many thousands of invalids who dare not take even the smallest quantity of Cinchona, or its alkaloid—Quinine—on account of the intense and unbearable headache and other distressing symptoms invariably produced, Vibrona has proved an inestimable boon.

Analysis showed that 100 parts by measure contained:

Alcohol	...	19.30 parts by measure.
Total solids	...	16.7 parts.
Glucose	...	6.4 "
Cane sugar	...	5.2 "
Ash	...	0.27 "
Acidity, volatile	...	0.07 "
" fixed	...	0.28 "
Alkaloid	...	0.02 "

The alkaloid was slightly bitter, and its solution showed a very slight fluorescence; it agreed well in its characters and reactions with a mixture of the alkaloids of cinchona, from which the quinine and cinchonidine had been removed.

#### BUGEAUD'S WINE.

This wine is supplied by Lebeault et Cie, of Paris, in bottles, price 4s., holding 16 fl. oz.

Dose: Adults, a small wineglassful half an hour before meals. This is described on the label as "Nutritive-Tonic Wine of Cinchona bark and Cocoa."

Analysis showed that 100 parts by measure contained:

Alcohol	...	14.80 parts by measure.
Total solids	...	21.5 parts.
Glucose	...	18.9 "
Ash	...	0.40 "
Acidity, volatile	...	0.13 "
" fixed	...	0.33 "
Alkaloid	...	0.01 "

The alkaloid was bitter, and agreed in its properties with the alkaloid of cinchona.

A wineglassful would represent about 2 minims of liquid extract of cinchona.

#### QUINA LAROCHE.

The London agents of this preparation are Comar and Son, Holborn Viaduct, London. The price is 2s. 9d. a bottle, holding 9 fl. oz.

Dose: As a stomachic, two measures per day after meals; for fevers, four to six measures a day. The measure supplied with the bottle holds a little over 1 fl. oz.

The preparation is described as

a vinous extract, containing concentrated in a small volume and free from all alteration all the soluble principles of the three best kinds of cinchona: red, yellow, and grey.

Analysis showed that 100 parts by measure contained:

Alcohol	...	16.90 parts by measure.
Total solids	...	26.9 parts.
Glucose	...	22.2 "
Ash	...	0.20 "
Acidity, volatile	...	0.05 "
" fixed	...	0.16 "
Alkaloid	...	0.05 "

The alkaloid was bitter, and agreed in its properties with the alkaloid of cinchona.

"Two measures" would represent about 10 to 15 minims of liquid extract of cinchona.

#### SERRAVALLO'S TONIC BARK AND IRON WINE.

This wine, stated to be prepared by J. Serravallo, Trieste, Austria, is sold in this country at the price of 3s. 6d. a bottle, holding 18 fl. oz.

Dose: Two or three liqueur glasses a day.

Analysis showed that 100 parts by measure contained:

Alcohol	...	17.26 parts by measure.
Total solids	...	21.2 parts:
Glucose	...	6.8 "
Cane sugar	...	12.2 "
Ash	...	0.23 "
Acidity, volatile	...	0.05 "
" fixed	...	0.23 "
Iron	...	0.01 "
Alkaloid	...	0.05 "

The alkaloid was bitter, and agreed in its properties with the alkaloid of cinchona.

A liqueur-glassful would represent about 3 minims of liquid extract of cinchona.

#### ST. RAPHAEL QUINQUINA TONIC WINE.

This wine, supplied by the Société du St. Raphael-Quinquina of Paris, is sold in this country at 3s. 3d. a bottle, holding 25 fl. oz.

Dose: A glass before and during meals.

Analysis showed that 100 parts by measure contained:

Alcohol	...	16.89 parts by volume.
Total solids	...	14.3 parts.
Glucose	...	11.8 "
Ash	...	0.25 "
Acidity, volatile	...	0.18 "
" fixed	...	0.19 "
Alkaloid	...	0.008 "

The alkaloid was moderately bitter, and agreed fairly in its properties with the alkaloid of cinchona.

A wineglassful would represent about 1½ minims of liquid extract of cinchona.

#### VANA.

This preparation is supplied by Burroughs, Wellcome, and Co., London, E.C., a bottle holding 17½ fl. oz. costing 2s. 6d.

Dose: Half a wineglassful three to four times daily.

This is described on the label as "presenting calcium glycerophosphate and the alkaloids of cinchona bark in a pure, sound wine."

Analysis showed that 100 parts by measure contained:

Alcohol	...	19.20 parts by measure.
Total solids	...	23.9 parts.
Glucose	...	20.0 "
Ash	...	0.23 "
Acidity, volatile	...	0.05 "
" fixed	...	0.27 "
Alkaloid	...	0.05 "
Calcium	...	0.01 "
Phosphorus in combination, calculated as phosphoric acid	...	0.13 "

The alkaloid was bitter, and agreed in its properties with the alkaloid of cinchona. The total calcium found is equivalent to 0.05 per cent. of calcium glycerophosphate; the phosphoric acid, however, is sufficient for more than five times this amount.

Half a wineglassful would represent about 3 minims of liquid extract of cinchona.

#### NOURRY'S IODINATED WINE.

This medicated wine is supplied by F. Comar and Son, Holborn Viaduct, London, at 3s. 6d. a bottle, holding 10½ fl. oz.

Dose: For adults, one tablespoonful.

In a pamphlet enclosed with the bottle it is stated that

Nourry's Wine is an iodinated wine rich in iodine... the iodine is chemically combined with tannin to an almost tasteless compound, and this is dissolved in a sound sweet wine.

The quantity of iodine is given as 1½ grains in each fluid ounce.

Analysis showed that 100 parts by measure contained:

Alcohol	...	11.5 parts by measure.
Total solids	...	27.3 parts.
Glucose	...	21.4 "
Glycerin	...	6.6 "
Ash	...	0.36 "
Acidity, volatile	...	0.06 "
" fixed	...	0.39 "
Iodine	...	0.33 "

This amount of iodine is practically equivalent to 1½ grains per fluid ounce; its reactions indicated that it was in combination with tannin.

## BAUDON'S WINE.

The wine, supplied by the Maison Bandon, Paris, is sold in this country through W. A. Massingham, London, E.C. The price charged for a bottle holding 19½ fl. oz. is 3s. 6d.

Dose: For adults—a wineglassful pure, or diluted with water or seltzer water before or during each principal meal. This is described on the label, which is in French, as "antimonio phosphaté," but in a circular in English enclosed with the bottle, it is said to be "a very agreeable preparation of the Phosphates, with a basis of Pure Muscat Wine," and no mention is made of antimony.

Analysis showed that 100 parts by measure contained:

Alcohol	...	...	12.75 parts by measure.
Total solids	...	...	14.3 parts.
Glucose	...	...	13.1 "
Ash	...	...	0.56 "
Acidity, volatile	...	...	0.12 "
" fixed	...	...	0.67 "
Phosphate, calculated as phosphoric acid	...	...	0.54 "
Antimony	...	...	a minute trace.

## DUSART'S WINE.

This wine, to be obtained wholesale from Wilcox and Co., London, W.C., is sold at the price of 4s. a bottle, holding nearly 14 fl. oz.

Dose: From 2 to 3 Bordeaux glasses for adults.

This is described on the label as a "lacto-phosphate de chaux, ferrugineux"; it appears that a non-ferruginous variety is also prepared.

Analysis showed that 100 parts by measure contained:

Alcohol	...	...	16.85 parts by measure.
Total solids	...	...	15.4 parts.
Glucose	...	...	12.8 "
Ash	...	...	0.55 "
Acidity, volatile	...	...	0.11 "
" fixed	...	...	0.35 "
Iron	...	...	0.09 "
Calcium	...	...	0.07 "
Phosphorus in combination, calculated as phosphoric acid..	...	...	0.03 "

## ST. RAPHAEL TANNIN WINE.

This wine is supplied in this country by a company in Valence (Drôme), France, through English agents (E. Gallais and Co.) in London.

The price of a bottle, holding 16½ fl. oz., is 2s. 6d.

Dose: Half a wineglassful after meals.

A pamphlet enclosed with the wine contains a dissertation on its properties, etc.; no definite statement is made as to the kind of tannin which it contains, and it is not apparent whether it is or is not intended to imply that it is derived from cinchona.

Analysis showed that 100 parts by measure contained:

Alcohol	...	...	14.65 parts by measure.
Total solids	...	...	16.5 parts.
Glucose	...	...	14.0 "
Ash	...	...	0.29 "
Acidity, volatile	...	...	0.11 "
" fixed	...	...	0.41 "

Indications were obtained of a minute trace of alkaloid. The amount of tannin present did not differ greatly from the amount in an ordinary port wine, matured in wood, with which it was compared.

## SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

The annual general meeting of this Society was held at 11, Chandos Street, Cavendish Square, on May 20th. In the absence of the President, Mr. J. Warrington Haward, acting Treasurer, took the chair. Twenty members were present.

It was reported that the society's invested funds amount to £100,071, from which was derived in interest the sum of £3,121 17s. 1d.; the sum received in subscriptions and donations was £645. During the past year the sum of £3,017 was distributed amongst the annuitants of the charity, 48 widows and 16 orphans, each widow receiving on an average £50 besides an additional £10 as a Christmas gift, and each orphan £12 and a gift of £3 at Christmas. The Copeland Fund is a special fund which

enables the society to grant to any widow or orphan already in receipt of the society's ordinary relief extraordinary assistance in special circumstances of unusual distress, such as blindness, paralysis, insanity, severe disabling accident, or grave permanent disease, and to continue such extra relief in the case of orphans beyond the age of 16 or 18 years (at which under the society's existing by-laws the ordinary relief ceases) for such further period as the court of directors may think fit. During the year two widows in receipt of grants died. One, whose husband had paid in subscriptions £19 19s., received £1,500. The other, whose husband had paid in annual subscriptions £31 10s., received £3,300; she had been in receipt of grants since 1855. Two new widows were elected during the year, and on December 31st there were 47 widows and 15 orphans in receipt of grants. One of the widows has been on the books since 1854, and has already received over £2,200. Relief is only granted to the widows and orphans of deceased members who have paid their annual subscription for three years, or who are life members. During the year nearly fifty letters were received from widows of medical men, who, in many instances, had been left practically penniless, asking for relief, but this had to be refused, as their husbands had not been members of the society. The directors cannot too strongly urge upon the members of the medical profession, especially the younger, the desirability of joining the society. Membership is open to any registered practitioner who at the time of his election is resident within a twenty-mile radius from Charing Cross. Should any member remove beyond the limits of the society he nevertheless continues to be a member. The annual subscription is two guineas; every member who has paid this sum for twenty-five years becomes a member for life. Life membership may also be obtained by the payment of one sum, varying with the age of the applicant. Further particulars and application forms may be obtained from the Secretary at the offices of the Society, 11, Chandos Street, Cavendish Square, W.

A cordial vote of thanks was passed from the chair to the editors of the medical papers in which from time to time notices of the society are published.

## BRITISH MEDICAL BENEVOLENT FUND.

At the May meeting of the Committee sixteen cases were considered and grants amounting to £150 made to fourteen applicants, two cases being postponed for further inquiry. Appended is an abstract of the cases relieved:

Daughter, aged 63, of late M.R.C.S. Was left quite unprotected for at father's death more than thirty years ago, and now, with poor health and failing eyesight, finds it impossible to support herself. Relieved twice, £24. Voted £12.

Wife, aged 48, of L.R.C.P. Edin. For several years past has been obliged to support herself on account of husband's whereabouts being unknown. Now asks for a little help towards the education of one of her daughters, aged 10. Voted £5.

L.F.P.S. Glasg., aged 75. Has practised for many years past in the South-West of England, but receipts have now dwindled to less than £1 a week. No children. Voted £12.

Widow, aged 37, of M.D. Dubl. Quite unprotected for at husband's death six months ago, and is at present incapable of earning a living owing to ill-health. One child, aged 12. Voted £10.

Daughter, aged 66, of late M.R.C.S., L.S.A. Has supported herself since the age of 17, and helped younger members of the family, but is now obliged to give up a small school on account of ill-health. Slight help from a brother, who can ill afford it. Voted £12.

Widow, aged 57, of L.R.C.P., L.R.C.S. Ire. Finds great difficulty in getting a suitable post, and is temporarily given a home by a widowed sister, who is herself partly dependent on her daughters. Relieved once, £5. Voted £5.

L.R.C.P., L.R.C.S. Edin., aged 49, who practised for several years as an assistant, but had to have one eye enucleated, and has nearly lost the sight in the other, owing to iritis and glaucoma. No income; wife lets lodgings. Five children, aged 14 to 9. Relieved once, £18. Voted £18.

Widow, aged 56, of M.R.C.S. Eng., L.R.C.P. Edin. Since husband's death, more than twenty-five years ago, has maintained herself by cleaning offices, but now suffers from bronchitis and emphysema, and is unable to continue such hard work. Relieved twice, £22. Voted £12.

Widow, aged 62, of L.R.C.P., L.R.C.S. Edin. Only income a small pension from a City company and has recently had many unavoidable expenses in consequence of a serious illness. Two sons only just self-supporting. Relieved twice, £12. Voted £10.

Widow, aged 48, of M.B., C.M. Edin. Practically unprotected for at husband's death twelve years ago, but with the help of