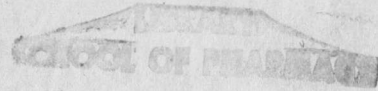


ELIXIRS

by

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Historical Introduction.

The word elixir appears to be of Arabic origin, being derived from two Arabic words, Al-iksir, meaning the iksir, i. e. the name of the transmuting medicine used by the alchemists in their attempts to convert baser metals into gold and silver. Gold was supposed to be obtainable with the aid of the philosopher's stone, the great elixir or magisterium, or the red tincture; silver with the aid of the stone of the second order, the small elixir or megisterium, or the white tincture. (Schelenz, Gesch. p. 218.) Totally unlike our present notion associated with these terms, these words were not at all necessarily associated with liquid preparations. Both words, elixir and tincture, were applied originally to solids, (e. g. powders,) and only later to liquids as well.

Like the tincture, so the elixir was supposed to possess phenomenal medicinal virtues. Indeed, no fundamental distinction appears to have been made between tincture and elixir.

With the replacement of alchemistic by iatrochemical doctrines, the medicinal import of the elixir continued to hold sway while naturally its alchemistic role began to fade. Indeed, the only preparation of the materia pharmaceutica which to-day reminds of the activity of the great

Paracelsus, the founder of the iatrochemical school, is an elixir, viz. the Elixir proprietatis. Although secret nostrums were exploited at all times, they appear to have experienced their first great boom with the followers of Paracelsus. The popular secret nostrums of Germany known as the Thuringian "Olitaeten" are traced back to this period. (Schelenz, p. 392.)

Croll, a Hessian physician, during his travels learned the formulas of many Paracelsian preparations, e. g. that of the Elixir proprietatis. The use of eleum sulfuris, kept secret by its inventor, was made known by him. To these he added others known by his own name. One of these is Croll's Elixir uterinum which was official in many pharmacopoeias at the beginning of the 19th century.

Another physician of this period is Wedel (1645-1721) whose memory was kept alive for a long time by an Elixir pectoralis. (Schelenz, p. 500.) In like manner the Elixir aperiativum, still in use, is a reminder of Dr. Gabriel Clauder, who, however, continued an adherent of alchemy. (Schelenz, p. 511.) The Elixir antiscorbuticum is a universal remedy that was invented and sold by the Polish physician, Gelema, at the close of the 17th century. (Schelenz, p. 514.)

Among the specialties and secret nostrums of the 18th century, the Lebensessenz, in all probability a sort of

Elixir ad longam vitam, of the Augsburg physician Kiesow played an important role. An imperial privilege or patent was granted for its exploitation. (Schelenz, p. 579.)

Still more famous is the Elixir d'or, i. e. elixir of gold, a fanciful name given by La Motte to a sort of ethereal tincture of ferric chloride. Under the name of Tinctura toniconervina this secret remedy was given free of cost to all by Count Betuscheff, Russian ambassador in Copenhagen. Through the dishonesty of his chemist, the secret was betrayed to the Frenchman La Motte, who obtained fabulous prices for his elixir of gold until Klaproth and others worked out the formulas of both preparations. The original formula was bought in 1781 by the Empress Catherine of Russia for 3000 Rubles for the purpose of publication. (Schelenz, p. 598.) Thus the "elixir of gold" became the means of transferring, if not transmuting, the coin of credulous people to the purse of an enterprising advertiser and exploiter of a secret nostrum. Associating their preparation with the name of a saint, the Sisters of the Poor of Paris in our enlightened times advertise the merits of an Elixir de St. Vincent de Paul.

As has already been pointed out, the alchemists appear to have used the terms elixir and tincture well nigh synonymously. A pharmaceutical authority at the beginning of the 19th century makes the following statement concerning elixirs: "The difference between an elixir and a tincture

appears to consist in this that the former are thicker liquids, darker in color and not completely transparent. The liquid medium is either wine or alcohol. They are prepared like tinctures or essences". (Trommsdorff, Woerterbuch, I, p. 274.)

The formulas for the elixirs of the past appear to have been worked out according to the adage "Was Bitteres fuer den Mund ist fuer den Magen gesund". It remained for the American pharmaceutical manufacturer to discover that by making elixirs of an agreeable taste they could be exploited much more readily upon physician as well as the public at large.

Prior to 1865, i. e. before the advent of the American pharmaceutical manufacturer, only two elixirs of this kind were used to any extent in this country, viz. Elixir of calisaya, and Elixir of ammonium valerinate. The list of these preparations, however, was rapidly augmented and reached its height between 1870 and 1875. Like in all such cases, a reaction gradually set in and at the present day many of the once popular elixirs have fallen into disuse. (Caspari, p. 260.)

Hence in modern American pharmacy the word elixir has come to mean an entirely different class of preparations from that formerly designated by this name. The distinguishing features of the elixirs at present appear to be their pleasantly aromatic sweet taste.

They have, no doubt, formed a pleasant vehicle for many remedies, yet the alcohol content, up to 25 p. c., has in some instances at least caused them to be positively injurious. Moreover, the active ingredients, other than alcohol, are frequently present in such small quantities as to render the medicinal value of the preparation doubtful. (Caspari, p. 260.)

The American Pharmaceutical Association, in order to secure greater uniformity in the composition of the many elixirs dispensed by pharmacists, published a series of 86 formulas for elixirs in the National Formulary. This book first appeared in 1888, and a third edition, thoroughly revised, was issued in 1905. Another series, containing about 275 formulas for elixirs and many valuable directions in manipulation, was published by J. U. Lloyd in 1892, under the title "Elixirs and Flavoring Extracts".

Elixirs of the U. S. P. from 1820 to 1900.

Phil.,

N. Y.

1820 1830 1840 1850 1860 1870 1880 1890 1900

Elixir Adjuvans	-	-	-	-	-	-	-	-	+
" Aromaticum	-	-	-	-	-	-	-	+	+
" Aurantii	-	-	-	-	-	-	+	-	-
" Ferri quinae et strychninae phosphatum	-	-	-	-	-	-	-	-	+
Elixir Phosphori	-	-	-	-	-	-	-	+	-

The preceding table indicates that of the five(5) elixirs no more than three were official at one time, and that only the last three editions of the U. S. Pharmacopoeia recognized elirs by this generic name.

The first galenical to be recognized as elixir, was the elixir aurantii, which was official in 1880 and has not again been official under that name, the elixir aromaticum of 1890 and 1900 taking its place.

In the edition of 1890 two elixirs were official, viz. elixir aromaticum and elixir of phosphorus. The

Of the five elixirs that have been official, only two are of medicinal value, the three remaining ones being used as agreeable vehicles.

BIBLIOGRAPHY.

Condidus, P. C. 1869.

Compound elixir taxaracum--the best vehicle for quinine.

Proc. A. Ph. A., 17, p. 395.

This elixir is said to mask completely the taste of quinine.

_____, 1871.

Report of the committee on unofficial formulas.

Proc. Amer. Pharm. Assoc., 19, p. 351. (Year Book of Pharmacy, 1872, p. 302.)

The committee presents a formula for elixir of phosphate of iron, quinia and strychnia.

Beckman, R. 1866.

Query No. 18.

Proc. W. P. A., 7, p. 44. (Pharm. Era, 1, p. 57.)

The author proposes a formula for elixir of pyrophosphate of iron, quinine and strychnine that is said not to produce a precipitate.

_____, 1887.

Report of the committee on unofficial formulas.

Proc. N. Y. P. A., 9, p. 145. (Pharm. Era, 1, pp. 329 and 372.)

This committee states that basic elixir is more popular than all other elixirs. It undertook to test all formulas possible and to improve and simplify them rather than to create new formulas.

The following are the formulas tested:

Conc. Elixir Essence

p. 147.

Basic Elixir

p. 148.

Elixir of Ginger	p. 159.
Elixir of Gentian	p. 159.
Elixir Gentian with Tr. Citro-Chloride of Iron	p. 159.
Ferrated Elixir of Gentian	p. 159.
Elixir of Guaiac	p. 159.
Elixir of Glycyrrhiza	p. 160.
Elixir Glycyrrhiza Comp.	p. 160.
Elixir Grindelia	p. 160.
Elixir of Guarana	p. 160.
Elixir of Guarana and Celery	p. 160.
Elixir of Humulus	p. 160.
Elixir of Hypophosphites Comp.	p. 160.
Comp. Laxative Elixir	p. 161.
Elixir Bromide of Lithum	p. 161.
Elixir of Hydrastis	p. 161.
Elixir of Ipecac	p. 161.
Elixir of Krameria	p. 161.
Elixir of Lobelia	p. 162.
Elixir of Lupulin	p. 162.
Elixir of Malt and Iron	p. 162.
Elixir of Matico	p. 162.
Elixir of Matico Comp.	p. 162.
Elixir of Malt and Hypophosphites	p. 162.
Assayed Elixir of Opium	p. 163.
Elixir Pancreatin	p. 163.
Elixir of Pepsin	p. 163.
Elixir of Pepsin and Pancreatin	p. 163.
Elixir Pepsin and Bismuth	p. 163.
Elixir Pepsin, Bismuth and Strychnia	p. 164.
Elixir Pepsin and Iron	p. 164.
Elixir Phosphorus	p. 164.
Elixir Phosphorus and Nux Vomica	p. 164.
Elixir of Jaborandi	p. 164.
Elixir Bromide of Potassium	p. 164.
Elixir Iodide of potassium	p. 165.
Elixir of Quassia	p. 165.
Elixir Quinine Bisulph	p. 165.
Elixir Hydrochlorate of Quinine	p. 165.
Elixir Cascara Sagrada	p. 165.
Elixir of Rhubarb, Arom.	p. 165.
Elixir of Rhubarb	p. 165.
Elixir of Rubus	p. 165.
Elixir of Sanguinria	p. 166.
Elixir of Senna	p. 166.
Elixir of Senna and Frangula	p. 166.
Elixir of Senega	p. 166.
Elixir Bromide of Sodium	p. 166.
Elixir Hypophosphite of Sodium	p. 166.
Elixir Salicylate of Sodium	p. 166.

Conc. Elixir Calisaya	p. 150.
Conc. Elixir Citrate of Iron	p. 152.
Conc. Elixir Phosphate of Iron	p. 152.
Conc. Elixir Am. Citrate of Bismuth	p. 152.
Conc. Elixir Liquor Strychnia	p. 152.
Elixir Aloin and Strychnia	p. 152.
Elixir Aloin Strychnia and Belladonna	p. 152.
Elixir Bromide of Ammonium	p. 153.
Elixir Valerianate of Ammonium	p. 153.
Elixir of Anise--Aniseed Cordial	p. 153.
Elixir of Bismuth	p. 153.
Elixir of Buchu	p. 153.
Elixir Bryonia	p. 153.
Elixir Buchu Comp.	p. 153.
Elixir Caffeine Cit.	p. 154.
Elixir Bromide of Calcium	p. 154.
Elixir Hypophosphite of Calcium	p. 154.
Elixir Iodide of Calcium	p. 154.
Elixir Lactophosphate of Calcium	p. 154.
Elixir of Columbo	p. 154.
Elixir of Cardamon Comp.	p. 154.
Elixir of Capsicum	p. 154.
Elixir of Catechu	p. 155.
Elixir of Chirata	p. 155.
Elixir of Chloral Hydrate	p. 155.
Elixir of Chloroform	p. 155.
Elixir of Cinchona	p. 155.
Elixir Cinchona Comp.	p. 155.
Elixir of Calisaya	p. 155.
Elixir of Beef, Iron and Calisaya	p. 156.
Elixir of Calisaya with Hypophosphites	p. 156.
Elixir of Calisaya with Lactophosphates	p. 156.
Elixir of Calisaya and Phosphate of Iron	p. 156.
Elixir Calisaya, Iron and Bismuth	p. 157.
Elixir Calisaya, Iron, Bismuth and Strychnia	p. 157.
Elixir Calisaya, Iron and Strychnia	p. 157.
Elixir of Colchicum	p. 157.
Elixir of Conicum	p. 157.
Elixir of Cubebs	p. 157.
Elixir of Coca	p. 157.
Elixir of Ergot	p. 157.
Elixir of Eucalyptus	p. 158.
Elixir of Wahoo	p. 158.
Elixir Phosphate of Iron, Quinine and Strychnia	p. 158.
Elixir Pyrophosphate of Iron	p. 158.
Elixir Citro-Chloride of Iron, Quinine and Strychnia	p. 159.
Elixir of Frangula	p. 159.

Elixir of Stillingia Comp.	p. 167.
Elixir of Squill Comp.	p. 167.
Elixir of Damiana	p. 167.
Elixir of Valerian	p. 167.
Elixir of Viburnum	p. 167.
Elixir Viburnum Comp.	p. 167.
Elixir of Yerba Santa	p. 168.

Mittlebach, W. 1899.

Elixir Iron, Quinine and Strychnine Phosphate.

Am. Journ. Pharm., 71, p. 495.

The author suggests a method for the preservation of the elixir, iron, quinine and strychnine phosphate.

_____, 1900.

Elixir of beef from "fresh beef."

Pharm. Era, 23, p. 343.

The editor suggests a formula for this elixir and mentions the precautions to be observed in its preparation.

_____, 1900.

Gathered formulas.

Pharm. Era. 23, p. 582.

Under the above title formulas for elixirs of terpin hydrate and of frangula are given.

_____, 1900.

Elixir of Lactated Pepsin.

Pharm. Era. 23, p. 557.

The editor suggests a formula for this elixir that differs from that of the N. F.

_____, 1900.

Elixir Lactopeptine.

Pharm. Era, 23, p. 394.

The editor gives a formula for this elixir.

_____, 1900.

Red Elixir.

Pharm. Era, 23, p. 35.

The editor gives a formula for red elixir, which can be used as a vehicle with iron salts.

_____, 1900.

Elixir Rhubarb and Pancreatin.

Pharm. Era, 23, p. 149.

The editor suggests a formula for this elixir.

_____, 1900.

Swedish Elixir.

Pharm. Era, 23, p. 556.

The author quotes Hager's formula for the "elixir ad longam vitam".

_____, 1900.

Elixir of terpin hydrate.

Pharm. Era, 23, p. 611.

The editor gives a formula for the preparation of the elixir of terpin hydrate differing from the one given a few months before. (vol. 23, p. 149.)

1900.

_____,
Elixir Terpin Hydrate with Heroin.

Pharm. Era, 23, p. 701.

The editor gives a formula for this elixir.

Hemm, F.

1904.

Elixir terpin hydrate with wild cherry.

Proc. Missouri Pharm. Assoc., 26, p. 81.

The author offers formulas for (a) Elixir terpin hydrate with wild cherry, (b) Elixir terpin hydrate with wild cherry and heroin, (c) Elixir terpin hydrate, wild cherry and codeine.

1905.

_____,
Elixir Ferri, Quininae et Strychninae Phosphatum.

Pharm. Era, 34, p. 579.

The writer states that of all the preparations placed on the market, the one prepared in accordance with the formula submitted is the most satisfactory.

1906.

_____,
Elixir of Iron, Quinine and Strychnine Phosphate.

Pharm. Era, 35, p. 146.

The editor comments on a formula submitted and gives a method of preparation. He states that the new pharmacopoeial process should be followed for the sake of uniformity as the formula submitted has no advantage over the pharmacopoeial process.

Hughes, C.

1906.

Elixir Ferri, Quininae et Strychninae Phosphatum.

Am. Journ. Pharm., 78, p. 420.

The writer states that if in the preparation of this elixir, it be left slightly acid instead of neutral as the U. S. P. directs, a more satisfactory elixir will be obtained.

1907.

Improved Formulas for Pharmacopoeial and N. F. Preparations.

Amer. Drugg. and Pharm. Rec., 51, p. 394.

The writer states that the principal fault with the U. S. P. Elixir of Iron, Quinine and Strychnine is its change of color on keeping and the formation of a precipitate. Miner states that the formation of a precipitate can be prevented by diluting the phosphoric acid with some elixir before adding it to the alcoholic solution of the alkaloids.

Cohn, A. I.

1907.

The Pharmacopoeial Formula for Elixir of Three Phosphates.

Amer. Drugg. and Pharm. Rec., 51, p. 106.

The writer in a rebuttal of criticisms on a former paper of his, states that his objection was directed not to the character of the finished product of the elixir, iron, quinine and strychnine phosphates, but to the complicated method of preparation. He advocates a simpler formula equally as good as the official method.

Cohn, A. I.

1907.

A few suggestions regarding the U. S. P. VIII.

Proc. N. Y. S. Pharm. Assoc., 29, p. 233. (Am. Drugg. and Pharm. Rec., 51, p. 5; Am. Pharm. Assoc., 56, p. 71.)

The writer gives a formula for the preparation of the Elixir ferri, quininae et strychninae phosphatum, which he claims is highly satisfactory, and much simpler to manipulate than the official U. S. P., formula.

Dawson, E. S.

1907.

Notes on some preparations of the U. S. P. VIII.

Proc. N. Y. Pharm. Assoc., 29, p. 222. (Amer. Drugg. and Pharm. Rec., 51, p. 69; Proc. Amer. Pharm. Assoc., 56, p. 71.)

The writer states that when the official working process and formula for the preparation of the elixir iron, quinine and strychnine phosphates is carefully followed an elegant product results. He advises every pharmacist to have this elixir as part of his regular stock.

Raubenheimer, O.

1907.

More about Elixir of Triple Phosphates.

Amer. Drugg. and Pharm. Rec., 51, p. 275.

The writer is confident that this elixir is one of triple phosphates and that the alkaloids are not present as acetates as maintained by Cohn, also that the elixir prepared with ammonium acetate is the most stable preparation.

Editor,

1908.

Deposit in Elixir of Iron, Quinine and Strychnine.

Amer. Drugg. and Pharm. Rec., 52, p. 69.

The editor quotes H. Seldes to the effect that the elixir when clouded can be cleared up by warming in a water bath.

Utech, P. H.

1908.

Improved elixir terpin hydrate.

Proc. Pa. Pharm. Assoc., 31, p. 275. (Natl. Druggist, 40, p. 23.)

The writer offers an improved formula for the preparation of the elixir of terpin hydrate that will retain the terpin hydrate in solution indefinitely and will not precipitate when subjected to freezing temperatures.

_____, 1909.

Elixir of terpin hydrate with wild cherry.

Pharm. Era, 41, p. 88.

The editor being unable to give the formula for the proprietary preparation called for quotes a formula that has previously been published.

_____, 1909.

Compound elixir of sumbul.

Pharm. Era, 41, p. 492.

The editor states that, according to the Standard Formulary, quite dissimilar mixtures are dispensed under the name of "compound elixir of sumbul" and quotes the formulas.

_____, 1909.

Rheumatic elixir.

Pharm. Era, 41, p. 589.

The editor being unable to give a formula for the proprietary article, suggests three different formulas for this preparation.

1909.

Compound elixir of aletris.

Pharm. Era, 41, p. 111.

In answer to a query the editor quotes the formula published by the Cincinnati Academy of Medicine.

1909.

Elixir Calisaya.

Pharm. Era, 41, p. 12.

A formula for this elixir is given, which replaces that given for elixir of cinchona in previous editions of the N. F. Elixir Calisaya is not suitable for combination with preparations of iron.

1909.

Elixir of lactated pepsin.

Pharm. Era, 41, p. 517.

A formula is given, which is claimed to be a modification of the "compound digestive elixir" of the N. F., the objection to which is that the ferments, pepsin, pancreatin and diastase in liquid combinations destroys one another.

1909.

Beringer, G. M.

Elixir of Gentian, N. F.

Proc. Pa. Pharm. Assoc., 32, p. 255. (Am. Jour. Pharm., 81, p. 539.)

The author states that by his method elixir of gentian can be easily and rapidly made, that it is more agreeable to the taste and that it possesses all of the advantages of a detannated elixir.

Aromatic elixir.

Pharm. Era, 41, p. 468.

The author claims that the aromatic elixir U. S. P. and N. F. is objectionable for use as a harmless diluent and vehicle for which it was originally intended, because it contains too high a per cent of alcohol. He, therefore, offers an improved elixir equally as efficient as the official aromatic elixir containing as small a proportion of alcohol as possible.

Marguier, A. F.

1909.

Suggestions for the Ninth Revision Committee of the U. S. P.

Proc. N. J. Pharm. Assoc., 1909, 39, p. 47. (Proc. Am. Pharm. Assoc., 58, p. 73; Yr. Bk. 1911, 48, p. 295; Natl. Druggist, 40, p. 78.)

The author suggests an improved formula for the preparation of the Elixir Iron, Quinine and Strychnine Phosphate.

Mittlebach, W.

1909.

The Natl. Formulary Elixirs.

Proc. A. Ph. A., 57, p. 873. (Proc. A. Ph. A., 58, p. 70.)

The author claims that elixirs are becoming more popular throughout the country, and that constant improvement is made in their preparation. He also mentions how they should be classified.

Wilbert, M. I.

1909.

The perpetuation of elixirs in the National Formulary.

Proc. A. Ph. A., 57, p. 1044. (Proc. A. Ph. A., 58, p. 70.)

The author regards the perpetuation of elixirs as evidence that we have not kept in touch with the advance made in pharmacology and drug therapy.

_____, 1910.

Why ferric hydroxide is used in preparing elixir gentian N. F.

National Druggist, 40, p. 467.

The writer states that ferric hydroxide is used in the preparation of the elixir of gentian for the purpose of precipitating a coloring principle contained in the extract of gentian, also because any excess of the precipitant itself is insoluble.

_____, 1910.

An improved formula for elixir of iron, quinine and strychnine.

National Druggists, 40, p. 115.

For the formula the original will have to be consulted. Reasons for the proposed change are not given.

La Wall, C.

1910.

Some Suggested Standards and Changes for the U. S. P.

Amer. Journ. Pharm., 82, p. 22.

The writer points out that a method of quantitatively estimating strychnine in the presence of quinine would be advised.

Some formulas proposed for National Formulary. IV.

The National Druggist, 41, p. 524.

The following are some of the new formulas that have been suggested for inclusion in the forth coming edition of the National Formulary.

Elixir Glycyrrhizea Aquosum.
Elixir Amygdalac Compositum.
Elixir Rubrum.
Elixir Trium Bromidorum.
Elixir Formatum.
Elixir Formatum Compositum.
Elixir Cardamomi Compositum.
Elixir Vanillini Compositum.

Hommell, P. E.

1911.

The U. S. P. Iron Preparations.

Proc. N. J. Pharm. Assoc., 41, p. 86.

The author recommends that the elixir ferri, quinae et strychninae phosphatum should be retained because it is a success therapeutically, but that the formula and the working process should be improved.

Utech, P. H.

1911.

Some pharmaceutical preparations.

National Druggist, 41, p. 465.

The author gives a method for preparing an elixir of terpin hydrate, containing twice the usual amount of terpin hydrate.

Approved, -

Edward Thurner

Prof. of Pharm. Chemistry