



# THE PHARMACEUTICAL RECIPE BOOK

SECOND EDITION

(R.B. II)

BY AUTHORITY OF THE  
AMERICAN PHARMACEUTICAL ASSOCIATION

PREPARED BY THE COMMITTEES ON RECIPE BOOK AND ON UNOFFICIAL  
FORMULAS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

1936

## PREFACE

"The Recipe Book represents the outcome of an effort of the American Pharmaceutical Association to place in the hands of the practicing pharmacist a reliable and comprehensive book of recipes applicable to his business. It is hoped this book will eventually assume the same serviceable and dignified position that the National Formulary has attained in its particular field." The foregoing introductory of the preface to the First Edition of the Recipe Book expressed a hope which has been given assurance by the favorable reception accorded the first edition.

The preparation of a second edition of the Recipe Book was necessitated by the demand for it after the first edition had been exhausted. A revision was prompted by the appearance of the U. S. Pharmacopœia XI and the National Formulary VI, deletions from which were to be included, and a continued desire on the part of the Association to extend the usefulness of the Recipe Book, and suggestions made by physicians, pharmacists, dentists, chiropodists, veterinarians and others for the revision of and inclusion of additional formulas, tables and other valuable data has resulted in an extensive revision.

The plan of revision, in general, follows that adopted in preparing the First Edition. Therefore, liberty is taken in repeating preparatory matter with necessary changes and additions.

### The General Principles Followed in the Compilation of the Work

The purpose of the Recipe Book is to supply definite formulas for those preparations which are not included in the official books, but which are in fairly common demand in the retail pharmacy, in the hospital pharmacy and in the manufacture of products relative to which druggists are called upon for advice or supply.

No regular order is attempted in the Preface to departmentize the divisions of the Book. They include the following General Subjects: Pharmaceutical Formulas, Hospital Formulas, Dental Formulas, Chiropodist Formulas, Laboratory Reagents, Veterinary Formulas, Photographic Formulas, Flavoring Formulas, Cosmetic Formulas, Vehicles, Technical and Miscellaneous Formulas, Agricultural Formulas, Industrial Formulas, First Aid, Table of Doses, Schedule of Antidotes for Poisons.

Deletions from the prior editions of the U. S. Pharmacopœia and National Formulary and inclusion of formulas from foreign pharmacopœias and formularies have found place in the several divisions listed.

The twelve sub-committees indicate further subjects, and an index of more than fifty pages records the number of formulas in Recipe Book II. The work assigned to the sub-committees was divided, in part, as given below; the titles are indicative of other related subjects in charge of the respective committees:

No. 1—Decoctions, Infusions, Elixirs, Emulsions, Glycerites, Juices, Mixtures, Vinegars and Waters.

No. 2—Extracts, Fluidextracts, Oleoresins, Resins and Tinctures.

No. 3—Ointments, Pills, Plasters, Suppositories and Effervescent Salts.

No. 4—Ampuls, Lozenges, Tablets, etc.

No. 5—Toilet Preparations, Smelling Salts, etc.

No. 6—Cosmetics, Creams, Manicure Preparations, Preparations for the Hair, etc.

No. 7—Cleaning Fluids, Disinfectants, Insecticides, Soaps, Utility Preparations, etc.

No. 8—Veterinary Preparations.

No. 9—Household Remedies.

No. 10—Photographic Formulas.

No. 11—Agricultural Formulas.

No. 12—Industrial Formulas.

The admission of formulas is dependent on a vote of two-thirds of the members of the Committee; the formulas have been tried out and include only preparations that can be compounded by the pharmacist. The titles of preparations have been studied so that each shall represent, as far as possible, the leading ingredients in the formula and therapeutically suggestive titles shall be eliminated. The Recipe Book has received mention in the Standard Year Book issued by the U. S. Department of Commerce.

Therapeutic authority is disclaimed regarding the remedial action, and no responsibility is assumed for the therapeutic value of the formulas or the specified doses, which are average doses based upon accepted practice; and these are given both in the metric and apothecaries systems. The Recipe Book does not aim to supply imitations for proprietary or trademarked articles, and permission has been obtained as far as possible for reprinting institutional formularies.

The arrangement of formulas, as far as possible, is in alphabetical sequence, the English title being accepted as the primary title, the Latin title as a synonym. Other synonyms are added whenever useful. The metric system is generally used, but English units are employed where these have become established through practice. Preparations of former editions of the U. S. Pharmacopœia and the National Formulary are included for record.

In all formulas, the ingredients that are official in U.S.P. XI or N.F. VI, are to be of the official strength, quality and purity.

Galenicals listed as ingredients, the formulas for which are not included in the official books, are specified as "R.B.," and formulas for them are to be found in this edition of the Recipe Book.

A list of abbreviations used in the text is appended to the "Historical Introduction" as was done in the first edition of the Recipe Book.

Coöperation and Assistance.—The Committee acknowledges and expresses its thanks for assistance rendered by members and former members of the Committee on Recipe Book and by other pharmacists in connection with the former edition and this revision.

Mrs. Herbert L. Kassner has served the Committee as editor during a part of the revision period. Her services in the preparation of copies for the printer are hereby acknowledged with thanks. Horatio C. Wood, Jr., M.D., of the New Jersey Board of Pharmacy, compiled a list of Poisons and Antidotes. C. W. Ballard and A. R. Bliss (non-members of the Committee) have also aided in this important work. E. G. Eberle and E. F. Kelly have also done splendid work in connection with the Recipe Book.

The Food and Drug Administration of The Department of Agriculture has given valuable assistance in the matter of revising titles.

The Revision Committee of the Recipe Book wishes to express its thanks to the Council on Dental Therapeutics of the American Dental Association for the helpful criticism given in connection with the Dental Formulas for this edition of the Recipe Book.

Thanks are extended to the American Veterinary Medical Association for the aid in preparing Formulas, and acknowledgment is given to those who contributed the Chiropodological Formulas.

The section on "Vehicles" was compiled from information obtained, by permission, from "Essentials of Prescription Writing" by Cary Eggleston, M.D. (through the courtesy of W. B. Saunders Company) and from material received from Bernard Fantus, M.D.

THE COMMITTEE ON RECIPE BOOK:

J. Leon Lascoff—Chairman

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C. J. CLAYTON

E. FULLEERTON COOK

MRS. M. A. DAVIS

BERNARD FANTUS

ROBERT P. FISCHELIS

E. N. GATHERCOAL

R. R. GERSTNER

W. H. GLOVER

WM. GRAY

L. D. HAVENHILL

S. L. HILTON

W. W. HORNE

FRED B. KILMER\*

OTTO RAUBENHEIMER

MISS C. M. ROEHR

THOMAS ROACH

W. L. SCOVILLE

J. K. THUM

C. P. WIMMER

## HISTORICAL INTRODUCTION

The American Pharmaceutical Association has ever been alive to the desirability of collecting and making accessible to retail pharmacists the formulas of preparations not included in any other official publication.

As early as 1856 a committee was appointed by the president to collect unofficial formulas and report them to the Association. The efforts of that committee and other committees continuing its work led eventually to the issuance of the present-day National Formulary. The enactment of the Food and Drugs Act made the National Formulary as well as the United States Pharmacopoeia official standard publications, and this fact made the publication of a book containing the formulas for remedies not included in the two official books a pressing necessity. Professor Henry P. Hynson, of Baltimore, had the foresight to urge upon the American Pharmaceutical Association the publication of such a book. In 1909, he wrote, as follows:

"I trust I may be pardoned for presuming to present to the Members of the Council for consideration and discussion at Los Angeles, the propriety of the American Pharmaceutical Association publishing a general druggist receipt book.

"I consider this an important matter just now, because it must be apparent to everyone that the coming editions of both the United States Pharmacopoeia and National Formulary must be more restricted, more scientific and much more works of standards than ever before and they cannot become such unless many eliminations are made, and to make these eliminations possible there must be some receptacle provided for them. It seems to me that the American Pharmaceutical Association would be wise to act quickly in the matter and publish a book which should not be, in any way, under government control or subject to criticism by anyone who is not actively engaged in pharmaceutical pursuits."

The proposition of Professor Hynson, together with letters from Leo Eliel and Otto Raubenheimer, on the same subject, were referred to the Committee on Standards for Non-Official Drugs and Chemical Products for consideration and report at the Los Angeles meeting of the Association. In addition, the Council recommended that the Committee named above devote its early attention to the compilation of a list of useful recipes for druggists' use.

At the Richmond meeting in 1910, the Committee on Unofficial Standards reported that it was not expedient at that time to compile a recipe book, as the committee felt that its efforts should be restricted to establishing correct standards for simples in the then forthcoming N.F. IV, and this undertaking would require all of the time of the committee.

At the same meeting, however, the question was agitated again. Among a number of recommendations to the Association made in the address of the Chairman of the Section of Pharmacy and Dispensing, Professor Otto Raubenheimer included one in which he recommended the publication of a recipe book, stating that the practical pharmacists of the country were in favor of such a book. In addition, Professor Raubenheimer addressed a communication to the Council suggesting that the matter be put into the hands of a "Committee on A. Ph. A. Recipe Book." This

suggestion was brought officially before the Council in the form of a motion made by Mr. Franklin M. Apple. According to that motion, seconded by Mr. Leonard A. Seltzer, a committee consisting of Messrs. Hynson and Raubenheimer, the General Secretary, the Secretary of the Council and the Chairman of the Finance Committee were to constitute a special committee to investigate the advisability of the Association publishing a druggists' recipe book; to define its scope and character, and submit plans and details for the consideration of the Council and the Association.

The motion was amended by George M. Beringer, seconded by Ambrose Hunsberger, to read that a committee of five be appointed for the purpose. The motion passed the Council and the Association, and the following were appointed to constitute the first committee: Messrs. O. Raubenheimer, M. I. Wilbert, F. M. Apple, Theo. D. Wetterstroem and J. M. Good. The committee immediately set out to collect useful formulas and at the end of the first year, about 120 formulas had been contributed.

At the request of Chairman Raubenheimer the original committee of five was enlarged in 1915 to fifteen members, namely: Scoville, Nixon (succeeded by Glover), Wimmer, Thum, Becker, Roehr, Roemer (succeeded by Spalding), Cook, Gray, Wetterstroem, Utech, Cliffe, Hynson (succeeded by LaWall), Wilbert and Raubenheimer as chairman. This committee, divided into seven sub-committees, in 1916 compiled Formulas No. 115 to No. 390 and during 1917 Formulas 391 to No. 642. These Formulas were published in the Journal A. Ph. A. as a special Department of "Pharmaceutical Formulas" and were copied to a considerable extent by other domestic and foreign pharmaceutical journals. Chairman Raubenheimer also compiled an Index of all the Formulas from February, 1912, up to December, 1916, which was published separately in Vol. V, Jour. A. Ph. A., and another one of the Formulas published during 1917 in Vol. VI.

Requests were then sent out broadcast for formulas which might be suitable for inclusion. These formulas were printed in the Journal of the A. Ph. A. each month. In 1916, one year after the Committee had been considerably enlarged and made into a standing committee of the Association, the number of formulas contributed numbered about 625. Several colleges offered their assistance in compounding and trying out the formulas submitted.

In May, 1920, in Washington, a new committee was appointed and J. Leon Lascoff was elected Chairman. This committee was later enlarged until it finally consisted of twenty-five members.

This group was sub-divided into several working committees, each with its respective chairman. In this way each man came in direct contact with the sort of work which interested him. Bulletins, voting sheets and formulas admitted for publication were sent to each of the members, and valuable criticism, many corrections and a number of new suggestions were received.

In April, 1921, the first set of Pharmaceutical Formulas, numbers 643 to 654, was published in the Journal of the Association; in May, formulas 655 to 667, in June, 668 to 683, and in July, 684 to 697, inclusive. More formulas appeared in the August and September numbers.

In September, 1923, at the Buffalo meeting of the American Pharmaceutical Association, Chairman J. Leon Lascoff turned over a collection of formulas to the Association, and also exhibited a large number of preparations with which he and other committee members had experimented.

This collection of formulas, as yet unedited, represented a total of over fifteen hundred. At the same meeting, Professor Ivor Griffith was elected editor and was requested to assemble and arrange the formulas for publication.

A careful study of these recipes showed the need for a reconsideration of their suitability for inclusion in the book, whereupon a Committee on Scope was appointed. This committee deleted some formulas which had outlived their usefulness and supplied others which were more modern to fill the gaps.

During this interval also many other up-to-date formulas were introduced and the completed manuscript was turned over by the Editor to the Council of the Association at the Philadelphia Convention, September, 1926. It was there favorably received by the Council and the Committee on Publication was authorized to secure bids on its publication.

The Historical Introduction, published in the first edition of the Recipe Book, closed with a report made at the meeting of the American Pharmaceutical Association held in Philadelphia, September, 1926. Editor Ivor Griffith reported that the Book was nearing completion.

The report was rendered at the General Sessions of the American Pharmaceutical Association of the meeting held in St. Louis, August, 1927, that the contract for the manufacture, the agency and sale of the Recipe Book, First Edition, had been awarded to J. B. Lippincott Company. In Council Letter No. 7, February 1, 1928, a request was made by Editor Ivor Griffith and Chairman J. Leon Lascoff that a meeting of the Sub Committee on Scope of the Committee on Recipe Book be held in New York, N. Y., during February, 1928. It was submitted that a final review of the text was desirable. Council Letter No. 9, published in the March Journal for 1928, reported the approval of the meeting which had been held February 14th and 15th. In addition to the members of the Sub-Committee on Scope, the following attended: Messrs. DuMez, Eberle, Fischelis, Griffith, Hilton, Kelly, Lascoff, Raubenheimer, Scoville and Wimmer. J. Leon Lascoff acted as Chairman and Ivor Griffith as Secretary.

The progress of the Recipe Book was reviewed, and the text studied in considerable detail. It was decided to omit assay processes for extracts, fluidextracts and wines in general, therapeutic terms and statements from the text, and to include introductory chapters to certain important groups of preparations for which such chapters had not been provided. The inclusion of a statement of the average alcoholic content of preparations was considered, but was not thought feasible at this time. A more complete classification was worked out, and the Editor was authorized to make necessary corrections and bring about uniformity in arrangement of formulas, wording of directions, titles, etc. The former titles will be found in the Index with appropriate references to the new titles.

The Committee on Recipe Book, at this time, was composed of the following: Chairman, J. Leon Lascoff; Editor, Ivor Griffith; I. A. Becker, C. J. Clayton, E. Fullerton Cook, M. A. Davis, Bernard Fantus, R. P. Fischelis, E. N. Gathercoal, Robert R. Gerstner, W. H. Glover, William Gray, L. D. Havenhill, S. L. Hilton, W. W. Horne, F. B. Kilmer, H. A. Langenhan, H. L. Meredith, F. W. Nitardy, Otto Raubenheimer, C. M. Roehr, Thomas Roach, W. L. Scoville, J. K. Thum, P. Henry Utech, C. P. Wimmer. Of these the following have ceased their labors: H. L. Meredith, P. Henry Utech and F. B. Kilmer.

The first edition of the Pharmaceutical Recipe Book was brought to conclusion



with 777 Pharmaceutical Formulas, 373 Hospital Formulas, 34 Dental Formulas, 66 Diagnostic Reagents and Clinical Tests, 28 Veterinary Formulas, 45 Photographic Formulas, 184 Cosmetic Formulas, 45 Flavoring Formulas, 69 Technical Formulas—a total of 1621 formulas.

At the Portland, Maine, Meeting it was reported that progress in line with the action of the Conference held in New York had been made, and that proofs of approximately half of the Book had been distributed. Announcement was made in March, 1929, that the Recipe Book had been completed; the first copy was designated as a memorial volume honoring Prof. Henry P. Hynson, the father of the movement. The ceremonial of the presentation, under the auspices of the Baltimore Branch, A. Ph. A., was part of the program at the Rapid City meeting.

On March 18, 1929, Chairman Lascoff gave a brief summary of the activities connected with the Recipe Book and presented to President H. A. B. Dunning, of the A. Ph. A., the original manuscripts which form part of the basis of the Recipe Book. This material was placed on exhibit at the meeting of the A. Ph. A. at Rapid City and there presented to the Association for its museum in Washington.

A second copy of the Book was presented to Chairman Lascoff by the American Pharmaceutical Association.

A third copy of the Recipe Book was formally presented to Editor Ivor Griffith on behalf of the American Pharmaceutical Association. In due procedure copies of the publication were also given to Joseph W. E. Harrison, Reba Kancher, Edward Hughes and Millicent R. LaWall, who had assisted Editor Griffith in his work.

Chairman Lascoff in behalf of the Committee expressed thanks for coöperation in giving publicity to the Recipe Book to the Druggists Circular, the Practical Druggist, the Chicago Retail Druggists Association News, the N. A. R. D. Journal, the Journal of the A. Ph. A. and others.

At a meeting of the American Pharmaceutical Association in Miami, Fla., the Chairman, J. Leon Lascoff, presented a comprehensive report of the sales of the Recipe Book and also quite a number of new formulas for the succeeding edition of the Recipe Book. A system of revision was prepared at the Miami meeting, and the Association by-laws were amended by an addition to Chapter VIII which placed the Recipe Book on the same basis as the National Formulary. The matter of another edition of the Recipe Book was discussed, and it was deemed advisable to prepare a revised edition rather than correct the first.

The work of revision, preparatory to the issuance of Recipe Book II, was begun in 1932.

Early in 1933, Bulletins containing formulas for the new Recipe Book were sent out for criticism and review. An extensive display of preparations prepared according to the Recipe Book was exhibited at the Madison meeting.

The favorable reception of the Recipe Book was evidenced when in May of 1934 Chairman Lascoff reported that practically all of the copies of the Recipe Book I had been sold and that it was necessary to proceed with the issuing of the second printing. The Council Letter of July 19 announced that the contract for printing and binding Recipe Book II had been awarded to the Mack Printing Co., Easton, Pa.

Chairman Lascoff submitted a complete report relative to the activities of the Chairman's office and the Committee. He reported that Mrs. Herbert L. Kassner was editing the formulas for the Recipe Book and arranging them, and correcting typo-

graphical errors, and that he was experimenting with new formulas and testing out composition and methods for others.

Several meetings held under the Chairman's directions for discussing the revision were attended by him, E. N. Gathercoal, E. F. Kelly, S. L. Hilton and E. G. Eberle.

These sessions have been helpful in perfecting the work of revision and bringing about early publication. The volume will contain nearly 2000 formulas.

### LIST OF ABBREVIATIONS

Austral. Ph. F.	Australian Pharmaceutical Formulary, 1925
B.P.	British Pharmacopœia, 1898
B.P.	British Pharmacopœia, 1914
B.P.	British Pharmacopœia, 1932
B.P.C.	British Pharmaceutical Codex, 1911
B.P.C.	British Pharmaceutical Codex, 1923
B.P.C.	British Pharmaceutical Codex, 1934
Cod. Fr.	Codex Française, 1927
D.A.B. III	Deutsches Arzneibuch, 1895
D.A.B. IV	Deutsches Arzneibuch, 1909
D.A.B. V	Deutsches Arzneibuch, 1910
D.A.B. VI	Deutsches Arzneibuch, 1925
D.M.	Dieterich's Manual
E.B. III	Ergänzungsbuch, Third Edition, 1906
F. Ital.	Farmacopea Ufficiale del Regno d'Italia, 1929
F.M.G.	Formulæ Magistrales Germanicæ (Berlin Formulary)
Lux. F.	Luxemburg Formulary
N.D.A.	National Dental Association
N.F. III	National Formulary, Third Edition
N.F. IV	National Formulary, Fourth Edition
N.F. V	National Formulary, Fifth Edition
N.N.R.	New and Non-Official Remedies (1928) American Medical Association
Ph. Aust.	Pharmacopœia Austriaca, 1906
Ph. Dan.	Pharmacopœia Danica, 1907
Ph. Helv.	Pharmacopœia Helvetica, 1907
Ph. Ross.	Pharmacopœia Rossica, 1910
R.B. I	Recipe Book of the American Pharmaceutical Association, 1929
R.P.P.	Remington's Practice of Pharmacy
U.S.P. VIII	United States Pharmacopœia, Eighth Revision
U.S.P. IX	United States Pharmacopœia, Ninth Revision
U.S.P. X	United States Pharmacopœia, Tenth Revision

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# THE PHARMACEUTICAL RECIPE BOOK

## PART I PHARMACEUTICAL FORMULAS

In this section are included formulas from Part I (Pharmaceutical Formulas) and Part II (Hospital Formulas) of the first edition of the Pharmaceutical Recipe Book, as well as various new formulas.

### AMPULS

For directions for the preparation of ampuls, reference should be made to the National Formulary VI (see pages 20-28), where details are given under the following headings:

1. Cleansing and Sterilizing of Empty Glass Ampuls.
2. Preparation of Ampul Solutions.
3. Filling of Ampuls.
4. Sterilization of the Filled Ampuls.
5. Testing of Ampul Solutions for Sterility.

Under Section 4 the various Processes for sterilization referred to in the following formulas will be found (see N.F. VI, pages 24-26).

Ampuls containing solutions intended for parenteral use should be subjected to sterility tests (see N.F. VI, pages 26-28).

### AMPULS OF ATROPINE SULFATE

A sterile solution in physiological solution of sodium chloride containing atropine sulfate 0.0006 Gm. in each cc.

Atropine Sulfate . . . . .	0.6 Gm.
Physiological Solution of Sodium Chloride, a sufficient quantity,	

To make . . . . .	1000 cc.
-------------------	----------

Prepare the solution, adjust to a slightly acid reaction with fiftieth-normal sulfuric acid, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process F (see N.F. VI, page 26).

AVERAGE DOSE—1 cc.,

### AMPULS OF CALCIUM CACODYLATE

A sterile aqueous solution containing calcium cacodylate 0.045 Gm. in each cc.

Calcium Cacodylate . . . . .	45 Gm.
Ampul Water, a sufficient quantity,	

To make . . . . .	1000 cc.
-------------------	----------

Prepare the solution, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process C (see N.F. VI, page 25).

AVERAGE DOSE—1 cc.

### AMPULS OF GLYCEROPHOSPHATE COMPOUND

A sterile aqueous solution containing sodium glycerophosphate 0.1 Gm., strychnine cacodylate 0.0005 Gm., iron cacodylate 0.01 Gm. and chlorbutanol 0.005 Gm. in each cc.

Sodium Glycerophosphate . . . . .	100 Gm.
Strychnine Cacodylate . . . . .	0.5 Gm.
Iron Cacodylate . . . . .	10 Gm.
Chlorbutanol . . . . .	5 Gm.
Ampul Water, a sufficient quantity,	

To make . . . . .	1000 cc.
-------------------	----------

Prepare the solution, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process F (see N.F. VI, page 26).

AVERAGE DOSE—1 cc.

### AMPULS OF INDIGO CARMINE

A sterile aqueous solution containing indigo carmine 0.01 Gm. in each cc.

Indigo Carmine, Reagent . . . . .	10 Gm.
Ampul Water, a sufficient quantity,	

To make . . . . .	1000 cc.
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Prepare the solution, filter and fill 1 cc. or 5 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process D (see N.F. VI, page 25).

AVERAGE DOSE—1 cc.

### AMPULS OF IRON ARSENITE (SOLUBLE)

A sterile aqueous solution containing iron arsenite and ammonium citrate 0.06 Gm. in each cc.

Iron Arsenite and Ammonium Citrate . . . . .	60 Gm.
Quinine and Urea Hydrochloride . . . . .	10 Gm.
Ampul Water, a sufficient quantity,	

To make . . . . .	1000 cc.
-------------------	----------

Prepare the solution by dissolving the iron arsenite and ammonium citrate and the quinine and urea hydrochloride separately and then pouring the second solution into the first while stirring rapidly. Add ammonia water gradually until the solution is but slightly acid, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process D (see N.F. VI, page 25).

AVERAGE DOSE—1 cc.

### AMPULS OF IRON ARSENITE AND STRYCHNINE

A sterile aqueous solution containing iron arsenite and ammonium citrate 0.045 Gm., strychnine nitrate 0.001 Gm. and quinine and urea hydrochloride 0.005 Gm. in each cc.

Iron Arsenite and Ammonium Citrate . . . . .	45 Gm.
Strychnine Nitrate . . . . .	1 Gm.
Quinine and Urea Hydrochloride . . . . .	5 Gm.
Ampul Water, a sufficient quantity,	

To make . . . . . 1000 cc.

Dissolve the quinine and urea hydrochloride in sufficient ampul water to produce 500 cc. and the iron arsenite and ammonium citrate and strychnine nitrate in a second portion of ampul water to produce 500 cc. Pour the first solution into the second while stirring rapidly. Filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process F (see N.F. VI, page 26).

AVERAGE DOSE—1 cc.

### AMPULS OF IRON CACODYLATE

A sterile aqueous solution containing iron cacodylate 0.03 Gm. in each cc.

Iron Cacodylate . . . . .	30 Gm.
Ampul Water, a sufficient quantity,	

To make . . . . . 1000 cc.

Prepare the solution by adding the iron cacodylate to boiling ampul water and immediately cooling; filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process C (see N.F. VI, page 25).

AVERAGE DOSE—1 cc.

To prepare a solution containing iron cacodylate 0.0125 Gm. in each cc., use 12.5 Gm. for 1000 cc. of solution, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process C (see N.F. VI, page 25).

AVERAGE DOSE—1 cc.

NOTE—Some samples of iron cacodylate, while differing imperceptibly from others so far as can be determined chemically, cause extreme irritation at the site of injection. The solution should be as nearly neutral as possible by using ammonia water or solution of citric acid as required.

## AMPULS OF MERCURY CACODYLATE

A sterile aqueous solution containing mercury cacodylate 0.03 Gm. in each cc.

Mercury Cacodylate . . . . .	30 Gm.
Ampul Water, a sufficient quantity,	
To make . . . . .	1000 cc.

Prepare the solution, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process F (see N.F. VI, page 26).

AVERAGE DOSE—1 cc.

## AMPULS OF MERCURY CYANIDE

A sterile solution in physiological solution of sodium chloride containing mercury cyanide 0.00125 Gm. in each cc.

Mercury Cyanide . . . . .	1.25 Gm.
Physiological Solution of Sodium Chloride, a sufficient quantity,	
To make . . . . .	1000 cc.

Prepare the solution, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process D (see N.F. VI, page 25).

AVERAGE DOSE—1 cc.

To prepare a solution containing mercury cyanide 0.005 Gm. in each cc., use 5 Gm. for 1000 cc. of solution, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process D (see N.F. VI, page 25).

AVERAGE DOSE—1 cc.

## AMPULS OF RED MERCURIC IODIDE

A sterile aqueous solution of sodium iodide containing red mercuric iodide 0.01 Gm. in each cc.

Red Mercuric Iodide . . . . .	10 Gm.
Sodium Iodide . . . . .	10 Gm.
Ampul Water, a sufficient quantity,	
To make . . . . .	1000 cc.

Prepare the solution, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process F (see N.F. VI, page 26).

AVERAGE DOSE—1 cc.

## AMPULS OF MERCURY OXYCYANIDE

A sterile aqueous solution containing mercury oxycyanide 0.0015 Gm. in each cc.

Mercury Oxycyanide . . . . .	1.5 Gm.
Ampul Water, a sufficient quantity,	
To make . . . . .	1000 cc.

Prepare the solution, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process F (see N.F. VI, page 26).

AVERAGE DOSE—1 cc.

### AMPULS OF MORPHINE AND ATROPINE\*

A sterile solution in physiological solution of sodium chloride containing morphine sulfate 0.015 Gm. and atropine sulfate 0.0006 Gm. in each cc.

Morphine Sulfate . . . . .	15 Gm.
Atropine Sulfate . . . . .	0.6 Gm.
Physiological Solution of Sodium Chloride, a sufficient quantity,	
To make . . . . .	1000 cc.

Prepare the solution, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process F (see N.F. VI, page 26).

AVERAGE DOSE—1 cc.

### AMPULS OF SILVER NITRATE

A sterile aqueous solution containing silver nitrate 0.01 Gm. in each cc.

Silver Nitrate . . . . .	10 Gm.
Ampul Water, a sufficient quantity,	
To make . . . . .	1000 cc.

Prepare the solution with very dilute nitric acid if necessary, and fill 1 cc. sterile amber-colored ampuls under aseptic conditions.

These ampuls should be kept in a carton, as the solution is darkened by exposure to light.

AVERAGE DOSE—1 cc.

### AMPULS OF SODIUM ARSENATE

A sterile aqueous solution containing sodium arsenate 0.00025 Gm. in each cc.

Sodium Arsenate . . . . .	0.25 Gm.
Ampul Water, a sufficient quantity,	
To make . . . . .	1000 cc.

Prepare the solution, filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process D (see N.F. VI, page 25).

AVERAGE DOSE—1 cc.

### AMPULS OF SODIUM BICARBONATE

A sterile aqueous solution containing sodium bicarbonate 0.045 Gm. in each cc.

Sodium Bicarbonate . . . . .	45 Gm.
Ampul Water, a sufficient quantity,	
To make . . . . .	1000 cc.

\* Manufacturer's Narcotic License required if made in any quantity.



Prepare the solution, filter and fill 20 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process C (see N.F. VI, page 25).

AVERAGE DOSE—20 cc.

### AMPULS OF SODIUM IODIDE AND SODIUM SALICYLATE

A sterile aqueous solution containing sodium iodide 0.045 Gm. and sodium salicylate 0.045 Gm. in each cc.

Sodium Iodide . . . . .	45 Gm.
Sodium Salicylate, free from phenol derivatives . . . . .	45 Gm.
Ampul Water, a sufficient quantity,	
To make . . . . .	1000 cc.

Prepare the solution, filter and fill 20 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process C (see N.F. VI, page 25).

AVERAGE DOSE—20 cc.

### AMPULS OF SODIUM IODIDE AND SODIUM SALICYLATE WITH COLCHICINE

A sterile aqueous solution containing sodium salicylate 0.045 Gm., sodium iodide 0.045 Gm. and colchicine 0.00003 Gm. in each cc.

Sodium Salicylate, free from phenol derivatives . . . . .	45 Gm.
Sodium Iodide . . . . .	45 Gm.
Colchicine . . . . .	0.03 Gm.
Ampul Water, a sufficient quantity,	
To make . . . . .	1000 cc.

Prepare the solution, adding a small crystal of sodium thiosulfate, and adjust to a slightly alkaline reaction. Filter and fill 20 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process D (see N.F. VI, page 25).

AVERAGE DOSE—20 cc.

### AMPULS OF STRYCHNINE SULFATE

A sterile solution in physiological solution of sodium chloride containing strychnine sulfate 0.001 Gm. in each cc.

Strychnine Sulfate . . . . .	1 Gm.
Physiological Solution of Sodium Chloride, a sufficient quantity,	
To make . . . . .	1000 cc.

Prepare the solution and adjust to a slightly acid reaction with fiftieth-normal sulfuric acid. Filter and fill 1 cc. cleansed ampuls according to the requirements (see N.F. VI, pages 20-24). Sterilize by Process C (see N.F. VI, page 25).

AVERAGE DOSE—1 cc.