

Section on Pharmacopoeias and Formularies

Papers Presented at the Sixtieth Annual Convention

REPORT OF COMMITTEE ON NATIONAL FORMULARY.*

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The Committee on National Formulary have the pleasure to report that in so far as the revision of formulas now in the National Formulary, as well as the new formulas that have been accepted for inclusion in the N. F. IV are concerned, the work is practically completed. We are now ready to prepare mimeograph copies and to submit to the Council the formulas of the text, with very few exceptions, if the Association decides to publish the work without further delay.

In this case, however, it will be impracticable to give as complete a description, definition, and test of identity and quality for the drugs prescribed in the formulas which now have no U. S. P. standard, and this is considered desirable by our Committee since the Book is recognized under the provisions of the Food and Drugs Act of June 30, 1906. With immediate publication it will become necessary to confine these descriptions, in the revised edition, to the simple definition of the source and quality (kind) of drug or chemical, without giving tests to serve as standards.

This will probably comply with the letter of the law, inasmuch as the correct scientific title and common name, the botanical derivation and part used, if of vegetable origin, or the chemical formula, derivation and state of aggregation, if of mineral origin would seem to adequately establish the identity of the substance in question.

Nevertheless, this expedient should be adopted only tentatively, and only if the Association directs that the book be published without further delay, and then the successors of the present revision committee of the National Formulary should be appointed with the understanding that they shall vigorously continue in the endeavor, inaugurated by their predecessors, to provide suitable monographs for all articles for which no official standard is given, so that, when completed, it may be published as a supplement to the present revision, or may form the basis for a fifth revised edition.

However, it has lately been suggested that inasmuch as the completion of the National Formulary revision will come only a short time before the appearance of the U. S. P. IX, it might be opportune to issue the two National Standards—the U. S. P. and the N. F.—simultaneously. The advocates of this measure have pointed out a number of advantages resulting from the simultaneous preparation and publication of the two books as authoritative standards; the most im-

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portant being that the two standards could be made to harmonize and would therefore contain no conflicting formulas or tests. Those opposed (although in the minority) have advanced good reasons why this should not be done—chiefly the undesirability of delay. A simultaneous appearance of the two books seemed to have preference in the opinion of a large majority of the members, and when it was brought to a vote the Committee decided to recommend to the Association the postponement of the publication of the N. F. IV, until the revision of the U. S. P. IX also is completed in all its essential details.

One of the important arguments brought to bear on this decision was that the delay would enable the Committee to provide satisfactory monographs for the drugs and chemicals prescribed in the formulas, which will not be included by the Pharmacopœia, thus satisfying in every particular the requirements of the book under the provisions of the National Food and Drugs Act.

In this connection it should be stated that the Chairman of the Committee on Unofficial Standards (Mr. Beringer), in a recent communication to this Committee, has expressed his personal opinion to the effect:

“that when the publication of the N. F. has progressed to the point where the manuscript for Part 2 will be necessary, the work will be sufficiently well in hand to proceed without material delay.”

However, as the proposed simultaneous appearance of the U. S. P. and N. F. will offer many advantages to both books and to the users of the books, and as the revision of the U. S. P. is proceeding rapidly, and will therefore occasion very little delay in the appearance of the N. F. IV, we recommend that the plan of simultaneous appearance be approved by the Association, and that the N. F. Committee of Revision be authorized to cooperate with the U. S. P. Committee of Revision in preventing duplication of formulas or conflicting statements, requirements, or tests in the two official standards.

In fine, to recapitulate:

“We are prepared to supply the manuscript of the introductory chapters and formulas for a revised edition of the National Formulary, which, with a few exceptions, are now ready for mimeographing, while the exceptions are in advanced conditions, so that they will not occasion delay if immediate publication is decided.”

“The preparation of standards and tests for articles not official in the U. S. P. is not sufficiently advanced to formulate the monographs for inclusion as Part II of the National Formulary, if it is decided to publish at once, and the Committee do not consider it wise to establish standards for some articles and to omit them from others.”

“We therefore recommend that, if it is declined to publish the N. F. at once, a simple description, sufficient to establish identity, be given “tentatively” for all articles mentioned in Part II—to be supplanted in due course by monographs establishing carefully formulated standards and tests.”

“For these considerations, and other obvious advantages, we recommend postponement of the publication of the N. F. IV, until it can be issued simultaneously with the U. S. P. IX: this plan, in all probability, affording the time necessary for preparing properly formulated standards and tests for all the articles mentioned in Part II, and serving to so complete the present revision.”

For general information a brief statement of the present status of the work

accomplished is appended to this report, together with several exhibits, outlining in greater detail the work that remains to be done.

Now, personally addressing the Association in conclusion, the Chairman deplores his inability to attend the meeting at Denver. After an experience of two visits to Denver and vicinity—the one in 1895, the other in 1907, he is convinced that the unaccustomed high altitude and the necessarily strenuous exertion during the meeting would make it imprudent to repeat an experience which, particularly in 1907, came near to ending disastrously. He regrets this the more, because aside of denying himself the great pleasure of meeting his friends and associates, he is prevented from consulting with the members of his Committee on important questions still in abeyance. He feels confident, however, that the members of the N. F. Committee present at Denver will hold a conference and will supplement this report by such additional recommendations as may seem to them expedient in furtherance of the betterment of the book as a National Standard of Authority.

ADDENDUM TO REPORT ON THE NATIONAL FORMULARY.

SUMMARY OF THE PRESENT STATUS OF THE REVISION.

(To August 10, 1912.)

As recorded in the Bulletins of the N. F. Committee and from individual reports made to the chairman.

(Under the term "Article" are included both the formulas for the preparations and the introductory or explanatory chapters in the N. F. and "Appendix.")

Number of articles in the N. F. III.....	501	
Number of articles in the "Appendix".....	116	
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Total number of articles between the covers of the book.....		617
Articles dismissed from the N. F. III.....	96	
Articles rejected from the "Appendix".....	60	
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Total number of articles dismissed or rejected.....		156
Articles retained from the N. F. III in N. F. IV.....	405	
Articles admitted from "Appendix".....	56	
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Total number retained and admitted from the N. F. III and "Appendix".....		461
New articles admitted in N. F. IV.....		107
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Total number of articles to be included in Part I of the N. F. IV.....		568

MONOGRAPHS OF STANDARDS FOR PART II.

Number of monographs published in the "Journal".....	61	
Number still to be formulated.....	132	
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Total number (of which 63 for the additions) required.....		193

COLOR STANDARDS, ETC.

The referees have submitted for review by Sub-Committee "C" the text, with their approval, for nearly all of the 568 articles accepted for inclusion in Part I of the N. F. IV; the only exceptions of importance being the Color Standards, necessary as a basis upon which the formulas for Tincture of Cudbear, Compound Tincture of Cudbear, and Tincture of Caramel can be constructed; and a chapter on Sterilization is also as yet in a tentative form, awaiting a conference with the Committee of Revision of the U. S. P. in order to harmonize the texts for the two standards. As to the Color Standards, the Chairman of the Special Committee (Mr. Army), reports that he will present a paper at the annual meeting which will, in his opinion, satisfactorily solve the problem.

In further explanation of what remains to be done to complete the revision, the following "Exhibits," itemizing the articles that were reported as not ready August 9, 1912, and those

articles that have been since reported in Bulletin No. 48 (August 10, 1912,) as being practically ready, are herewith appended.

EXHIBIT I.

Articles referred to Committee "C" not submitted to Committee "D," as reported by Mr. Cook, August 9, 1912.

a. Preparations from the N. F. III:

The following fluidextracts:

139 Adonidis	152 Convallariae (flor)	164 Juniperi
140 Aletridis	153 Coptis	165 Kavae
141 Angelicae Rad.	154 Cornus	168 Petroselinii Rad.
142 Apii Grav.	156 Corydalis	170 Sterculiae
143 Aralia Racemosae	157 Coto	171 Stillingiae Co.
144 Arnicae Flor	158 Fuci	172 Trillii
145 Boldi	159 Helianthemi	173 Turnerae
146 Buchu Comp.	160 Humuli	175 Verbasci
147 Calendulae	161 Hydrangeae	176 Verbenae
149 Caulophylli	162 Jalapae	177 Zeae
150 Coffeae Tostae	163 Juglandis	

NOTE: The referee, Mr. Beringer, submitted the above formulas with his approval, based upon careful preparation.

b. New Preparations:

1 Fluidextract of Baptisia.	8 Fluidextract of Echinacea.
2 Fluidextract of Chionanthus.	9 Fluidextract of Euphorbia Pilulifera.
3 Fluidextract of Cinchona, Aqueous.	10 Fluidextract of Helonias.
4 Fluidextract of Condurango.	11 Fluidextract of Cataria (Nepeta.)
5 Fluidextract of Cocillana.	12 Fluidextract of Senecio.
6 Fluidextract of Dioscorea.	13 Fluidextract of Trifolium.
7 Fluidextract of Drosera.	

NOTE: In N. F. Bulletin No. 48, p. 652-65, Mr. Beringer makes a supplementary report as referee, in which he meets some of the adverse criticisms that have apparently prevented action on some of the fluidextracts above mentioned, namely (by number) 1, 2, 4 and 6 to 13 inclusive.

EXHIBIT II.

Articles for which text is not completed yet by Committee "D," reported as unsettled by Mr. Cook, August 9, 1912.

a. Preparations from N. F. III:

1- 44 Elix. Cinch. Iron & Calc. Lactophos. (Ra to supply formula.)
2-110 Emplast. Aromat.
3-203 Liquor Alumini Acetatis.
4-220 Liquor Ferri Oxochloridi.
5-462 Tinct. Persionis.
6-463 Tinct. Persionis Comp.

b. New Preparations:

1 Elixir of Formates.	
2 Solution of Aluminum Acet., Crude (Burrow's Solution.)	
3 Solution of the Bromides of Gold, Arsenic and Mercury.	
4 Solution of Hydrastine Compound.	
5 Syrup of Ammonium Hypophosphite.	
6 Syrup of Quinine with Chocolate.	
7 Sterilization (General Article.)	
8 Tincture of Caramel.	
9 Ferri Oxidum Saccharatum. (Ra to supply formula.)	
10 Spice Poulitice (Pulvis Aromaticus Rubefaciens.)	
11 Extract of Aconite Leaves	} if these shall be necessary.
12 Extract of Conium	
13 Extract of Ignatia	
14 Fluidextract of Galega.	
15 Fluidextract of Solanum.	
16 Fluidextract of Thuja.	
17 Fluidextract of Thyme.	

EXHIBIT. III.

The following is an outline of the report on the progress of the work done by the Committee on Unofficial Standards in connection with the definitions of standards for articles included in N. F. formulas and not described in the U. S. P.

The number before the name of the article indicates the number of the N. F. formula in which the article is used, while the numbers after the names refer to the pages of the Journal of the American Pharmaceutical Association or to the pages of the Circular Letters to the Committee on Unofficial Standards on which the article is described or discussed.

Articles without a number preceding them are either included in proposed additions to the N. F. or are being discussed by the Committee on Unofficial Standards for other reasons. All of the articles that have been published in the Journal of the American Pharmaceutical Association are available for inclusion in the N. F. at this time in compliance with the rule adopted by the Council at the Boston meeting.

The articles to which no page numbers are appended have, as yet, not been discussed by the Committee on Unofficial Standards.

N. F. No.

- 491 Absinthium. J. A. Ph. A. 1912, p. 67.
 320 Aconite Leaves. J. A. Ph. A. 1912, p. 67.
 321 Adonis. J. A. Ph. A. 1912, p. 67.
 139 Albumen
 217 Dried Blood Albumen. Circulars, 225, 244, 312.
 Dried Egg Albumen. Circulars, 225, 244, 313.
 140 Aletris. Circulars, pp. 210, 236, 308.
 374 Althaea Leaves. J. A. Ph. A. 1912, p. 68.
 Ammoniacum. Circulars, pp. 211, 237.
 Ammonium Hypophosphite. J. A. Ph. A. 1912, p. 68.
 297 Ammonium Ichthyol Sulphonate. Circulars, pp. 252, 271, 319.
 Ammonium Phosphate. Circulars, p. 290.
 27
 8 Anethol. J. A. Ph. A. 1912, p. 69.
 141 Angelica Root. J. A. Ph. A. 1912, p. 69.
 323 Angelica Seed. J. A. Ph. A. 1912, p. 69.
 576 Antimony Oxide.
 505 Antimony Sulphide. Circulars, pp. 255, 272, 319.
 130 Apples, Ripe Sour.
 143 Aralia Racemosa. Circulars, p. 299.
 444 Areca. J. A. Ph. A. 1912, p. 70.
 Arnica Root. J. A. Ph. A. 1912, p. 70.
 395 Asarum Root. Circulars, p. 300.
 213 Asclepias. J. A. Ph. A. 1912, p. 70.
 427 Balm of Gilead Buds.
 Baptisia.
 Barium Peroxide. Circulars, pp. 211, 224, 243, 312.
 355 Bayberry Root Bark. Circulars, p. 307.
 139 Birdseye Root.
 20 97 Blackberry Juice.
 431 97 Blackberry Root.
 145 Boldo. J. A. Ph. A. 1912, p. 71.
 Bone Ash.
 209 Bromauric Acid. J. A. Ph. A. 1912, p. 71.
 Bryonia. Circulars, p. 302.
 429 Buckthorn Berry Juice (Fermented.)
 520 Burgundy Pitch.
 307 Cacao Preparata. J. A. Ph. A. 1912, p. 71.
 Cactus Grandiflorus. J. A. Ph. A. 1912, p. 71.
 484 Calamina. Circulars, pp. 226, 245, 270, 315.
 69 Calcium Glycerophosphate.
 36 Calcium Lactate. J. A. Ph. A. 1912, p. 71.
 Calcium Peroxide. J. A. Ph. A. 1912, p. 72.
 343 Canella Alba. J. A. Ph. A. 1912, p. 161.
 461 463 Caramel.
 213 Carmine. Circulars, pp. 256, 273, 319.

N. F. No.

- 491 Cascarilla. J. A. Ph. A. 1912, p. 162.
 Cataria.
 235 Catechu.
 149 Caulophyllum. J. A. Ph. A. 1912, p. 162.
 142 Celery Seed. J. A. Ph. A. 1912, p. 162.
 441 Centaurium. J. A. Ph. A. 1912, p. 162.
 Cetraria. J. A. Ph. A. 1912, p. 162.
 214 Chestnut Leaves. Circulars, p. 303.
 Chionanthus.
 Chocolate.
 Coal Tar. J. A. Ph. A. 1912, p. 163.
 Cocculus Indicus. J. A. Ph. A. 1912, p. 163.
 Cocillana. Circulars, p. 305.
 151 Coffee, Green.
 150 465 Coffee, Roasted. Circulars, pp. 227, 245, 282, 316.
 376 Coltsfoot Leaves. Circulars, p. 307.
 Condurango. J. A. Ph. A. 1912, p. 163.
 152 Convallaria Flowers. J. A. Ph. A. 1912, p. 163.
 153 Coptis. Circulars, p. 205.
 154 Cornus.
 155 Cornus circinata.
 156 Corydalis.
 157 449 Coto Bark.
 462 463 Cudbear. J. A. Ph. A. 1912, p. 163.
 192 Cumarin. Circulars, pp. 256, 273, 320.
 173 Damiana. Circulars, p. 306.
 286 296 Dextrin. Circulars, pp. 228, 246, 271, 316.
 390 392 Dextrin, White. Circulars, pp. 228, 316.
 106 Diacetyl Morphine. J. A. Ph. A. 1912, p. 164.
 Diacetyl Morphine Hydrochloride. J. A. Ph. A. 1912, p. 164.
 52 357 Diastase.
 476 Dioscorea.
 Dogwood Bark. J. A. Ph. A. 1912, p. 164.
 Drosera. J. A. Ph. A. 1912, p. 165.
 544 Dulcamara. Circulars, p. 306.
 Echinacea. J. A. Ph. A. 1912, p. 165.
 200 Eggs, Fresh.
 217 Eggs, Yolk of.
 375 Elder Flowers.
 323 444 Elecampane.
 Eucalyptus Gum.
 Euphorbia Pilulifera. J. A. Ph. A. 1912, p. 165.
 320 321 Extract of Aconite Leaves.
 492 Extract of Beef.
 321 Extract of Conium.
 321 Extract of Ignatia.
 Foenugreek. J. A. Ph. A. 1912, p. 165.
 377 Formic Acid. J. A. Ph. A. 1912, p. 166.
 Formic Acid, Concentrated. J. A. Ph. A. 1912, p. 166.
 158 Fucus. J. A. Ph. A. 1912, p. 166.
 446 Galangal. J. A. Ph. A. 1912, p. 167.
 Galbanum.
 Galega.
 593 Garlic.
 209 Gold Leaf.
 513 Guaiac Wood. J. A. Ph. A. 1912, p. 167.
 561 Gutta Percha. Circulars, p. 294.
 Helonias. J. A. Ph. A. 1912, p. 167.
 159 Helianthemum.
 161 Hydrangia.
 Hyrdastine Hydrochloride. Circulars, pp. 258, 273, 321.
 Ignatia. J. A. Ph. A. 1912, p. 167.
 302 Infusorial Earth. Circulars, pp. 229, 247, 270, 316, 317.
 50 171 Iris. Circulars, pp. 212, 237.
 Iron Glycerophosphate. Circulars, pp. 257, 274, 320.
 57 Iron Lactate. J. A. Ph. A. 1912, p. 252.
 413 Iron Oxide Saccharated.

N. F. No.

- 223 Iron Peptonate. Circulars, pp. 230, 283.
 Iron Peptonate, Stronger. Circulars, p. 284.
 Iron and Manganous Oxides with Peptone. Circulars, p. 286.
 Iron and Manganous Oxides with Peptone, Stronger. Circulars, p. 288.
- 128 Jamaica Rum.
- 163 Juglans.
- 146 164 Juniper.
- 165 Kava Kava. J. A. Ph. A. 1912, p. 253.
- 308 Keratin.
- 170 Kola. J. A. Ph. A. 1912, p. 253.
 Kola Recens. J. A. Ph. A. 1912, p. 253.
- 221 239 Lead Carbonate. Circulars, pp. 230, 248, 271, 318.
- 111 Lead Oxide.
 Lead Oxide, Red. Circulars, p. 291.
- 388 Lime Juice.
 Mace. Circulars, p. 297.
 Magnesium Chloride. P. 292.
- 369 370 Magnesium Sulphate Anhydrous. J. A. Ph. A. 1912, p. 253.
- 374 Mallow Leaves.
- 233 Manganese and Sodium Citrate. Circulars, pp. 212, 238, 309.
 Manganese Glycerophosphate. Circulars, pp. 259, 274.
- 223 Manganese Peptonate. Circulars, p. 285.
- 374 Melilot Tops.
 Menispermum. Circulars, pp. 214, 240, 311.
- 167 491 Menyanthes.
- 281 313 Molasses.
- 376 Mullein Flowers.
 Mullein Leaves. J. A. Ph. A. 1912, p. 254.
 Oil of Cardamom. J. A. Ph. A. 1912, p. 254.
- 460 Papaveris. J. A. Ph. A. 1912, p. 254.
- 449 Para-coto Bark. J. A. Ph. A. 1912, p. 254.
- 168 Parsley Root.
- 222 Peptone, Dry.
 Phenolphthalein. J. A. Ph. A. 1912, p. 254.
 Physiological Salt Solution.
- 464 Pimpinella.
 Potassium Glycerophosphate. J. A. Ph. A. 1912, p. 255.
- 52 253 Pumice.
- 213 Quebracho. Circulars, pp. 215, 241, 311.
- 565 Quince Seed. J. A. Ph. A. 1912, p. 255.
- 428 Quinidine. Circulars, pp. 216, 242, 277, 278, 312.
 Quinine Glycerophosphate. Circulars, pp. 260, 275.
 Quinine Hypophosphite. Circulars, pp. 262, 276.
 Quinine Tannate. Circulars, pp. 263, 276.
- 92 Quinine Valerate.
- 231 Raspberries, Fresh.
- 243 Rennin.
- Rhamnus Catharticus. J. A. Ph. A. 1912, p. 255.
- 215 Rumex.
- 323 444 Saffron. J. A. Ph. A. 1912, p. 256.
- 477 Salep. J. A. Ph. A. 1912, p. 256.
- 171 Sambucus
- Sherry Wine. J. A. Ph. A. 1912, p. 256.
- 307 Silver Foil.
- 571 577 Sodium Carbonate.
- 215 Sodium Dichromate.
- 69 Sodium Glycerophosphate. Circulars, pp. 231, 248, 268, 318.
- Solanum.
- 386 387 Sponge.
- Strontium Arsenite. J. A. Ph. A. 1912, p. 257.
- 250 Strychnine Acetate.
 Strychnine Glycerophosphate. Circulars, pp. 264, 276.
- 102 Strychnine Valerate.
- 486 Suet.
- 570 Sulphurated Antimony.

N. F. No.

- 148 Thea. Circulars, pp. 233, 249, 280, 318.
 Thuja. J. A. Ph. A. 1912, p. 258.
 Tonka. Circulars, pp. 234, 249, 318.
 Trifolium.
 Trillium.
 552 Turpeth Mineral.
 174 Urtica.
 427 White Pine Bark. J. A. Ph. A. 1912, p. 258.
 Venice Turpentine. Circulars, pp. 234, 279, 318.
 376 Verbascum.
 176 Verbena.
 323 444 White Agaric.
 477
 496 White Ash Bark.
 499 Wine, Angelica.
 Wine, Port. Circulars, p. 295.
 171 Xanthoxylum Berries.
 193 Yeast.
 323 441 Zedoary.
 444 447 Zinc Peroxide. J. A. Ph. A. 1912, p. 258.

 POINTS OF CONTACT BETWEEN THE UNITED STATES PHARMACOPŒIA AND THE NATIONAL FORMULARY.

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The enactment of the Federal Food and Drugs Act which recognized the United States Pharmacopœia and the National Formulary as the authorities for medicinal standards, established a relationship between these two books which cannot be ignored.

The U. S. P., prior to this time, had been accepted in a half-hearted way as the standard for strength and purity of medicinal substances, and the enforcement of its requirements was rather through moral than legal means.

On the other hand the National Formulary had been created as an aid and convenience to the practicing pharmacist and physician and with little thought of its becoming a legal standard.

At the time of the passage of the National law the position of the two books was well defined; each occupied its place and with no thought of rivalry.

The U. S. P. was acknowledged by all to have the right to select the best drugs, chemicals and preparations which were available and when this selection had been made the N. F. Committee went over the remaining field and endeavored to unify those preparations which were used more or less popularly by both physicians and laymen but which had not been considered of sufficient importance to occupy a place in the Pharmacopœia.

The ground covered by the National Formulary was of acknowledged importance and for years the book has fulfilled this mission.

However, with its recognition under the Food and Drugs Act, as a legal standard, new importance has attached itself to the Formulary and its position has been somewhat changed. It yet retains a secondary place as compared with the Pharmacopœia and rightly so, but the secondary place consists only in the im-