

THE EXTENT AND USE OF FORMER PHARMACOPŒIAL PRODUCTS.*

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Recently there has been some concern expressed over the fact that the Pharmacopœias of the last two decades had omitted about four hundred titles. These omissions were decided on the ground that the products were obsolete or little used or for the reason that, in the opinion of the Committee, there were more efficient remedies of the same class retained in the Pharmacopœia.

As the sole purpose of the Revision Committee has been to improve the value and standing of our Pharmacopœia, the Committee and Board of Trustees approved the plan for a nation-wide study among both physicians and pharmacists, to determine the actual present-day use of these deleted substances.

If there was evidence of the extensive use of these substances, and no other sound reason prevented, they would naturally be returned to the next Edition and the Pharmacopœia made that much more representative of the best and most important in medicine.

Those substances official in the U. S. P. VIII and U. S. P. IX, but not admitted to the U. S. P. X, if therapeutic agents and not merely reagents, were alphabetically listed and these lists were mailed to all physicians and pharmacists whose names could be secured through the help of the secretaries of state medical and pharmaceutical associations and from other available lists. A total of about 9000 questionnaires were mailed to selected names but only about 500 were returned properly filled out.

From the pharmacy group, however, this return represented 237,853 prescriptions from every part of the United States and may be accepted as fairly representative of the situation.

Frequency of Use of Deleted Substances.—In reporting the results it has been difficult to know just how to present the facts graphically and comparatively.

All returned questionnaires were tabulated and the use of each substance in various sections of the United States and also the total use were recorded on ruled sheets and shown at the meeting. The extensive character of these tabulations make their reproduction here prohibitive. A summary of "total use," however, is given in the following pages. To show the uses of these deleted substances in comparison with substances at present official, the plan shown in Tables I and II was adopted.

Here the results of the Charters' Report¹ have been taken as the basis of comparison. To establish what might be termed "100 per cent usage" the article reported as being used most frequently was taken as 100 per cent and this is indicated by a line 100 centimeters long in the original chart. The thirty substances reported by Charters to be most frequently used are then listed in the order of their frequency, showing by a line of appropriate length the relative number of times prescribed (see Table I).

The Charters' Report covered the actual analysis of 17,577 prescriptions which were considered to fully represent the 43,000 prescriptions actually collected.

* Report made before Joint Session of the Scientific Section and Section on Practical Pharmacy and Dispensing, A. PH. A., Baltimore meeting, 1930.

¹ "Basic Material for a Pharmaceutical Curriculum," by W. W. Charters, page 265.

For comparison, this was calculated to the basis of 237,853 prescriptions, the number analyzed in the current study.

For interesting comparison the results of two other surveys are introduced for the same substances, one made by one of the authors (Cook) in 1928 and covering about 10,000 prescriptions from about 25 cities throughout the United States, and the other the Hallberg-Snow, study made in 1908, and representing 117,000 prescriptions.

The use, as indicated by these later surveys are represented by lines of proportional length. Having thus set up a basis for comparative use the deleted drugs, listed in the questionnaire, are entered in the order of their frequency of use in the 237,853 prescriptions reported upon.

The substance most frequently used is reported first and it will be seen (Table II) that this is 25 per cent of the use accorded Sodium Bicarbonate. Table II shows the actual and comparative number of times each of these fifty titles were prescribed according to the questionnaire study just completed. As figures on the tables as reproduced here are difficult to read, the actual number of times these substances were used in 237,853 prescriptions is repeated in the following list.

THE FIFTY DELETED MEDICINES MOST FREQUENTLY USED.

Elixir of Iron, Quinine and Strychnine Phosphates—3141	Fluidextract of Digitalis—361
Mixture of Rhubarb and Soda—2006	Tincture of Arnica—348
Camphor Monobromated—1842	Fluidextract of Sarsaparilla—311
Strontium Bromide—1594	Calcium Phosphate Precipitated—306
Cerium Oxalate—1417	Extract of Opium—281
Antiseptic Solution—1239	Compound Powder of Acetanilid—268
Bismuth Magma—1223	Gallic Acid—258
Syrup of Hypophosphites Compound—1078	Fluidextract of Grindelia—255
Acid Nitrohydrochloric Dilute—791	Tincture of Cannabis—252
Wine of Colchicum Seed—749	Bismuth Beta Naphthol—236
Sodium Perborate—694	Syrup of Blackberry—215
Hamamelis Water—658	Quinine Salicylate—215
Ammonium Iodide—605	Syrup of Hypophosphites—208
Syrup of Acacia—602	Aromatic Powder—207
Dilute Solution of Lead Sub-Acetate—519	Fluidextract of Viburnum Prunifolium—207
Extract of Ergot—514	Zinc Phenolsulphonate—207
Morphine (Alkaloid)—506	Pill Cathartic, Vegetable—198
Wine of Ipecac—506	Limonis Succus—197
Fluidextract of Nux Vomica—501	Nitrohydrochloric Acid—192
Compound Spirit of Ether—494	Tincture of Cimicifuga—188
Tincture of Gelsemium—465	Fluidextract of Gentian—188
Extract of Gentian—435	Extract of Digitalis—187
Dilute Hydrocyanic Acid—431	Santonin—183
Fluidextract of Wild Cherry—380	Fluidextract of Podophyllum—182
Lithium Citrate—364	Syrup of Calcium Lactophosphates—170

The fifty most frequently used medicines, among those deleted from recent Pharmacopœias, having been listed above, the remaining deleted substances are listed below with an indication of their frequency of use. The number of prescriptions examined is the same in all of the following lists; hence the words "in 237,853 prescriptions," will be omitted, except in the first heading.

100 PERCENT USE & LESS

CHARTERS REPORTS 8008 DRUGS AS MOST FREQUENTLY USED MEDICINE - 67% THESE IN 1927 PRESCRIPTIONS PROPORTIONALLY THIS WOULD BE 5488 TIMES IN 1927 PRESCRIPTIONS SINCE 67% THE NUMBER IN THE QUESTIONNAIRE ANALYSIS

THIS IS TAKEN AS 100 PER CENT USE

THE FIRST THIRTY ARTICLES ARE THOSE MOST FREQUENTLY USED, WITH THEIR PERCENTAGE OF USE CHARTED.

1	SODIUM BICARBONATE	100%
2	ACID ACETYLSALICYLIC	99%
3	COD. SULPH	98%
4	ACETPHENETIDIN	97%
5	TR. NUX. VOMICA	96%
6	AMMONIUM CHLORIDE	95%
7	SODIUM BROMIDE	94%
8	PHENYL SALICYLATE	93%
9	SODIUM SALICYLATE	92%
10	BISMUTH SUBNITRATE	91%

11	MILD MERCUROUS CHLORIDE	90%
12	PHENOL	89%
13	CAFFEINE CITRATE	88%
14	POTASSIUM CITRATE	87%
15	CAMP. TR. OF OPIUM	86%
16	MENTHOL	85%
17	SYR. WILD CHERRY	84%
18	TINCT. BELLADONNA	83%
19	STRYCHNINE SULPHATE	82%
20	QUININE SULPHATE	81%
21	SP'T. ETHYL NITRITE	80%
22	SYRUP OF IPECAC	79%

23	CAMPHOR	78%
24	TINCTURE ACONITE	77%
25	COMP. MIXT. GLYCYRRHIZA	76%
26	BORIC ACID	75%
27	ZINC OXIDE	74%
28	TR. DIGITALIS	73%
29	SYRUP OF SQUILL	72%
30	ACID HYDROCHLOR. DIL.	71%

Table I.—The thirty U. S. P. X medicines most frequently prescribed. Graphic illustration of their relative use as reported by Charters, Cook and Hallberg.

FIVE ARTICLES WERE USED 150 TO 175 TIMES IN 237,853 PRESCRIPTIONS.

Cinchoninae Sulphas—164

Spiritus Aetheris—167

Fluidextract. Phytolaccae—155

Tinctura Aloes—165

Sodii Phenolsulphonas—156

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THE RELATIVE USE OF DELETED ARTICLES

STUDY OF THE USE OF 376 ARTICLES OFFICIAL IN THE U.S.P. VII OR THE U.S.P. IX BUT NOT ADMITTED TO THE U.S.P.X - 237,853 STUDIED SODIUM BICARBONATE USED AS THE BASIS OF COMPARISON, 100% USE

PARAMETER	PER CENT	ARTICLE NAME
ELIX. IR. QUIN. STRYCH. PHOS.	1.1	ELIX. IR. QUIN. STRYCH. PHOS.
MIST. RHEI ET SODAE	1.1	MIST. RHEI ET SODAE
CAMPH. MONOBROM.	1.1	CAMPH. MONOBROM.
STRONTII BROMIDUM	1.1	STRONTII BROMIDUM
CERII OXALAS	1.1	CERII OXALAS
LIQUOR ANTISEPTICUS	1.1	LIQUOR ANTISEPTICUS
MAGMA BISMUTH	1.1	MAGMA BISMUTH
SYR. HYPOPHOSPHITUM COMP.	1.1	SYR. HYPOPHOSPHITUM COMP.
ACID. NITROHYDROCHLOR. DIL.	1.1	ACID. NITROHYDROCHLOR. DIL.
VIN. COLCHICI SEMINIS	1.1	VIN. COLCHICI SEMINIS
SODII PERBORAS.	1.1	SODII PERBORAS.
AQUA HAMAMELIDIS.	1.1	AQUA HAMAMELIDIS.
SYRUPUS ACACIAE	1.1	SYRUPUS ACACIAE
AMMONII IODIDUM	1.1	AMMONII IODIDUM
LIQ. PLUMBII SUBACET. DIL.	1.1	LIQ. PLUMBII SUBACET. DIL.
EXT. ERGOTAE.	1.1	EXT. ERGOTAE.
MORPHINA.	1.1	MORPHINA.

VINUM IDECACUANHAE	VINUM IDECACUANHAE
E'DEXT. NUCIS VOMICAE	E'DEXT. NUCIS VOMICAE
SPIRITUS AETHERIS COMP.	SPIRITUS AETHERIS COMP.
TINCT. GELSEMII.	TINCT. GELSEMII.
EXT. GENTIANAE	EXT. GENTIANAE
ACIDUM HYDROCYANICUM DIL.	ACIDUM HYDROCYANICUM DIL.
E'DEXT. PRUNI VIRGINIANAE	E'DEXT. PRUNI VIRGINIANAE
LITHII CITRAS.	LITHII CITRAS.
E'DEXT. DIGITALIS.	E'DEXT. DIGITALIS.
TINCTURAE ARNICAE.	TINCTURAE ARNICAE.
E'DEXT. SARSAPARILLA COMP.	E'DEXT. SARSAPARILLA COMP.
CALCII PHOSPHAS PRAECIPIT.	CALCII PHOSPHAS PRAECIPIT.
EXTRACT. OPII.	EXTRACT. OPII.
PULVIS ACETANILIDI COMP.	PULVIS ACETANILIDI COMP.
ACIDUM GALLICUM	ACIDUM GALLICUM
E'DEXT. GINDELIAE.	E'DEXT. GINDELIAE.
TINCTURA CANNABIS	TINCTURA CANNABIS

PREPARATION	NUMBER OF ARTICLES	NAME
...	BISMUTHI BETANAPHTHOLAS
...	SYRUPUS RUBI
...	QUININAE SALICYLAS
...	SYRUPUS HYPOPHOSPHIT.
...	PULV. AROMATICUS
...	F'DEXT. VIBURNI PRUNIFOLIIL
...	ZINCI PHENOLSULPHONAS
...	PIL. CATHARTICAE VEGT.
...	LIMONIS SUCCUS
...	ACID. NITROHYDROCHOR
...	TINCT. CIMICIFUGAE
...	F'DEXT. GENTIANAE
...	EXT. DIGITALIS.
...	SANTONICA
...	F'DEXT. PODOPHYLLI
...	SYR. CALCII LACTOPHOS.

Table II.—Graphic illustration of the most largely used medicines among those deleted from the U. S. P., as compared with the most frequently used U. S. P. X medicines (see Table I).

ELEVEN ARTICLES WERE USED 125 TO 150 TIMES.

- Ext. Aconiti—145
- Ext. Sumbul—146
- Fluidextract. Aconiti—150
- Fluidextract. Taraxaci—149
- Fluidextract. Tritici—130
- Morphinae Acetas—128
- Sparteinae Sulphas—134
- Tinct. Guaiaci Ammoniata—140
- Tinct. Hydrastis—129
- Ungt. Hydrargyri Nitratis—141

ELEVEN ARTICLES WERE USED 100 TO 125 TIMES.

- Acidum Hydrobromicum Dil.—111
- Alumini Sulphas—109
- Ammonii Valeras—113
- Bromoformum—111
- Carbo Animalis Purif.—124
- Ceratum Resinae Comp.—108
- Ferri et Quininae Citras—119
- Fluidextract Viburni Opuli—111
- Ungt. Stramonii—108
- Vinum Antimonii—103
- Zinci Carbonas Praecipitatus—105

TWENTY-TWO ARTICLES WERE USED 75 TO 100 TIMES.

- Diastasum—78
- Emulum Olei Morhuae Cum Hypophosphitibus—99

- Ext. Gelsenii—86
- Ext. Hydrastis—80
- Fluidextract. Apocyni—82
- Fluidextract. Capsici—90
- Fluidextract. Cubeba—90
- Fluidextract. Lobelia—83
- Hydrargyri Oxidum Rubrum—89
- Lithii Bromidum—86
- Oleum Copaiba—80
- Oleum Cubeba—95
- Oleum Rosa—95
- Physostigminae Sulphas—95
- Sodii Glycerophosphas—99
- Sodii Nitrates—98
- Sodii Sulphis—85
- Syrupus Lactucarii—100
- Terebinthina—82
- Tinct. Guaiaci—78
- Tinct. Ipecacuanhae et Opii—99
- Tinct. Sanguinaria—100

TWENTY-SEVEN ARTICLES WERE USED 50 TO 75 TIMES.

- Acidum Camphoricum—62
- Arnica—63
- Cataplasma Kaolini—60
- Ceratum Plumbi Subacetatis—69
- Ext. Taraxaci—67
- Ferri Pyrophosphas Solubilis—70
- Fluidextract. Pilocarpi—56
- Fluidextract. Sanguinaria—56
- Glyceritum Hydrastis—58

Hydrastinæ Hydrochloridum—68
 Linimentum Belladonnæ—64
 Liquor Ferri Subsulphatis—59
 Lithii Benzoas—66
 Oleum Thymi—73
 Pilulæ Rhei Comp.—58
 Pulv. Morphinæ Comp.—55
 Sodii Arsenas—65
 Sodii Chloras—62
 Spiritus Juniperi Comp.—64
 Strontii Iodidum—54
 Strychnina—68
 Syrupus Ferri, Quininæ et Strychninæ Phosphatum—63
 Tinct. Calendulæ—69
 Tinct. Quillajæ—52
 Unguentum Hydrargyri Oxidi Rubri—73
 Viburnum Prunifolium—64
 Vinum Ferri Amarum—57

FORTY-EIGHT ARTICLES WERE USED ONLY
 26 TO 50 TIMES.

Alumini Hydroxidum—30
 Anisum—28
 Aqua Amygdalæ Amaræ—33
 Argenti Nitras Mitigatus—44
 Auri et Sodii Chlor.—31
 Calcii Hypophosphis—40
 Calcii Sulphidum Crudum—27
 Emplastrum Hydrargyri—49
 Ext. Cimicifugæ—27
 Ext. Viburni Prunifolii—34
 Fluidextract. Aspidospermatis—30
 Fluidextract. Aurantii Amari—31
 Fluidextract. Berberidis—28
 Fluidextract. Cubebæ—44
 Fluidextract. Gelsemii—46
 Fluidextract. Hamamelidis Foliorum—46
 Fluidextract. Krameriæ—37
 Fluidextract. Sabal—31
 Fluidextract. Stillingiæ—40
 Fluidextract. Stramonii—37
 Fluidextract. Sumbul—31
 Fluidextract. Valerianæ—48
 Gossypii Cortex—37
 Hydrastina—27
 Hyoscyaminæ Sulphas—29
 Infusum Pruni Virginianæ—28
 Infusum Sennæ Comp.—32
 Linimentum Ammoniacæ—45
 Linimentum Terebinthinæ—41
 Lithii Carbonas—41
 Magnesii Sulphas Effervescens—27
 Oleoresina Cubebæ—37
 Oleum Erigerontis—27
 Oleum Sabinæ—31

Oleum Sesami—29
 Pilulæ Aloes et Mastiches—26
 Pilulæ Ferri Iodidi—35
 Sodii Hypophosphis—46
 Sodii Sulphis Exsiccatus—37
 Spiritus Gaultheriæ—34
 Syrupus Amygdalæ—34
 Tinct. Aloes et Myrrhæ—49
 Tinct. Cinnamomi—39
 Trochisci Sodii Bicarbonatis—27
 Ungt. Potassii Iodidi—36
 Ungt. Zinci Stearatis—34
 Viburnum Opulus—28
 Zinci Iodidum—44

FIFTY-FOUR ARTICLES WERE USED ONLY
 10 TO 25 TIMES.

Aethylis Carbamas—13
 Amygdala Amara—25
 Amygdala Dulcis—15
 Aqua Creosoti—15
 Aspidosperma—18
 Bismuthi et Ammonii Citras—15
 Caffeina Citrata Effervescens—24
 Calamus—12
 Ceratum Camphoræ—18
 Chondrus—13
 Confectio Sennæ—12
 Emulsum Amygdalæ—13
 Ext. Euonymi—11
 Ferri et Ammonii Tartras—11
 Ferri et Potassii Tartras—16
 Ferri et Strychninæ Citras—11
 Fluidextract. Calumbæ—17
 Fluidextract. Convallariæ—17
 Fluidextract. Eupatorii—23
 Fluidextract. Frangulæ—13
 Fluidextract. Mezerei—15
 Fluidextract. Rubi—19
 Fluidextract. Spigeliæ—12
 Fluidextract. Veratri Viridis—18
 Grindelia—12
 Fluidextract. Xanthoxyli—12
 Guaiacum—16
 Hamamelidis Folia—12
 Hydrastininæ Hydrochloridum—20
 Iodolum—19
 Liquor Sodii Arsenatis—19
 Liquor Sodii Glycerophosphatis—19
 Lithii Salicylas—23
 Lupulinum—18
 Mistura Ferri Composita—18
 Naphthalenum—15
 Oleoresina Lupulini—19
 Oleum Adipis—15
 Oleum Pimentæ—16

Pilocarpus—17
 Pilulæ Aloes et Myrrha—22
 Piperina—24
 Plumbi Iodidum—18
 Sinapis Alba—13
 Spiritus Amygdalæ Amara—16
 Spiritus Juniperi—16
 Sumbul—16
 Syrupus Krameria—13
 Tincture Gallæ—16
 Tincture Quassia—17
 Tinctura Serpentaria—12
 Triticum—19
 Vinum Ergotæ—11
 Vinum Ferri—21
 Vinum Opii—16

126 ARTICLES WERE USED ONLY 1 TO 10 TIMES.

Acetum Opii—3
 Anthemis—1
 Apocynum—5
 Argenti Oxidum—10
 Berberis—7
 Bismuthi Citras—10
 Calcii Sulphas Exsiccatus—3
 Calendula—3
 Cassia Fistula—3
 Chirata—1
 Chloralformamidum—6
 Coca—4
 Collodium Cantharidatum—4
 Collodium Stypticum—8
 Confectio Rosæ—10
 Conium—2
 Convallaria Radix—2
 Coriandrum—1
 Cusso or Brayera—9
 Cypripedium—1
 Emplastrum Resinæ—1
 Emplastrum Saponis—9
 Emulsum Chloroformi—2
 Euonymus—1
 Eupatorium—1
 Ext. Leptandra—2
 Ext. Physostigmatis—7
 Ext. Quassia—2
 Ferri Hypophosphis—8
 Ficus—6
 Fluidextract. Aromaticum—6
 Fluidextract. Calami—7
 Fluidextract. Chimaphilæ—8
 Fluidextract. Chirata—5
 Fluidextract. Cocæ—6
 Fluidextract. Conii—5
 Fluidextract. Cypripedii—9
 Fluidextract. Euonymi—10
 Fluidextract. Foeniculi—7
 Fluidextract. Geranii—4
 Fluidextract. Guaranæ—2
 Fluidextract. Lappæ—8
 Fluidextract. Leptandra—7
 Fluidextract. Lupulini—9
 Fluidextract. Matico—1
 Fluidextract. Pareira—7
 Fluidextract. Quassia—8
 Fluidextract. Quillaja—3
 Fluidextract. Scutellaria—2
 Fluidextract. Serpentaria—6
 Fluidextract. Staphisagria—2
 Frangula—2
 Glycyrrhizinum Ammoniatum—8
 Guarana—2
 Hæmatoxylo—5
 Humulus—4
 Lactucarium—4
 Leptandra—2
 Liquor Chlori Comp.—10
 Liquor Hydrargyri Nitratis—2
 Lithii Citras Effervescens—6
 Mangani Hypophosphis—2
 Marrubium—1
 Masticho—1
 Matico—1
 Matricaria—3
 Moschus—9
 Mucilago Sassafras Medullæ—5
 Oleatum Atropinæ—1
 Oleatrum Cocainæ—2
 Oleatrum Quininæ—8
 Oleatrum Veratrinæ—1
 Oleoresina Petroselinii—9
 Oleoresina Piperis—7
 Oleoresina Zingiberis—1
 Oleum Aethereum—1
 Oleum Hedeomæ—8
 Pareira—1
 Petroselinum—5
 Phytolacca—7
 Pilulæ Aloes et Ferri—4
 Pilulæ Laxativæ Comp.—4
 Pilulæ Opii—2
 Pilulæ Podophylli Belladonnæ et Capsici—5
 Pimenta—1
 Piper—2
 Potassii Cyanidum—7
 Potassii Hypophosphis—3
 Prunum—3
 Quillaja—7
 Rubus—8
 Sabal—1
 Sabina—2
 Sanguinaria—7

Sassafras—9
 Sassafras Medulla—2
 Sodii Arsenas Exsiccatum—2
 Sodii Cyanidum—3
 Spigelia—6
 Staphisagria—3
 Stillingia 5
 Sulphuris Iodidum—2
 Syrupus Calcis—2
 Syrupus Rosæ—4
 Taraxacum—5
 Terebinthina Canadensis—9
 Tinctura Lactucarii—9
 Tinctura Moschi—1
 Tinctura Pyrethri—5
 Trituratio Elaterini—4
 Trochisci Cubebæ—2
 Trochisci Gambir—2
 Trochisci Santonini—3
 Ungt. Veratrinæ—1
 Uranii Nitras—2
 Veratrina—1
 Vinum Cocæ—7
 Xanthoxylum—5
 Zinci Bromidum—8
 Zinci Valeras

TWENTY-THREE ARTICLES WERE NOT USED
 AT ALL IN THE 237,853 PRESCRIPTIONS.

Chimaphila
 Cinnaldehydum
 Emplastrum Opii
 Ext. Hæmatoxyli
 Ext. Scopolæ
 Fluidextract. Quercus
 Fluidextract. Sabinæ
 Fluidextract. Scopolæ
 Gelsemium
 Geranium
 Hedeoma
 Lappa
 Mezereum
 Mucilago Ulmi
 Pyrethrum
 Quercus
 Salvia
 Scopola
 Tamarindus
 Trochisci Glycyrrhizæ et Opii
 Trochisci Krameria
 Trochisci Potassii Chloratis
 Zea

RELATIVE USE BY DOCTORS.

About 3000 questionnaires were sent to physicians and only 222 returned their reports.

The same fifty drugs listed in Table II were reported by physicians as having the following percentage use. This was reported in percentage of those representing *frequent use* and those who *rarely* used the preparations.

Out of the 222 physicians reporting the numbers which follow indicate the actual number who *often* or *rarely* use the substances listed.

	Often. Per cent.	Rare. Per cent.		Often. Per cent.	Rare. Per cent.
Elixir of the Phosphates of Iron, Quinine and Strychnine	38	16	Wine of Ipecac	6	14
Mixture of Rhubarb and Soda	23	24	Fluidextract of Nux Vomica	14	8
Camphor Monobromated	21	26	Compound Spirit of Ether	13	26
Strontium Bromide	15	17	Tincture of Gelsemium	10	17
Cerium Oxalate	19	27	Extract of Gentian	13	9
Antiseptic Solution	22	19	Dilute Hydrocyanic Acid	4	13
Magma Bismuth	10	13	Fluidextract of Wild Cherry	13	12
Syrup of Hypophosphites Com- pound	14	13	Lithium Citrate	6	5
Acid Nitrohydrochloric Dilute	9	19	Fluidextract of Digitalis	15	9
Wine of Colchicum Seed	5	13	Tincture of Arnica	1	2
Sodium Perborate	14	13	Fluidextract of Sarsaparilla Compound	5	10
Hamamelis Water	14	25	Calcium Phosphate Precipitated	3	8
Ammonium Iodide	10	22	Extract of Opium	11	16
Syrup of Acacia	11	16	Compound Powder of Acetanilid	7	7
Dilute Solution of Lead Sub- acetate	18	26	Gallic Acid	4	23
Extract of Ergot	19	11	Fluidextract of Grindelia	7	12
Morphine (Alkaloid)	23	9	Tincture of Cannabis	5	16
			Bismuth Beta Naphthol	5	12
			Syrup of Blackberry	4	6

Quinine Salicylate	4	15	Nitrohydrochloric Acid	5	11
Syrup of Hypophosphites	7	12	Tincture of Cimicifuga	4	7
Aromatic Powder	5	12	Fluidextract of Gentian	9	7
Fluidextract of Viburnum Pruni- folium	9	16	Extract of Digitalis	10	12
Zinc Phenol Sulphonate	1	3	Santonin	4	8
Pill Cathartic Vegetable	9	10	Fluidextract of Podophyllum	2	8
Limonis Succus	2	9	Syrup of Calcium Lactophos- phates	9	9

USE BY HOSPITALS.

Questionnaires were sent to about 75 hospitals and 34 returned their questionnaires. The following list indicates the *percentage* of use of the fifty drugs by hospitals. See Table II.

	Often. Percent.	Rare. Percent.		Often. Percent.	Rare. Percent.
Elixir of Iron, Quinine and Strychnine Phosphates	62	6	Fluidextract of Digitalis	21	18
Mixture of Rhubarb and Soda	44	32	Tincture of Arnica	12	47
Camphor Monobromated	24	62	Fluidextract of Sarsaparilla Compound	18	32
Strontium Bromide	38	35	Calcium Phosphate Precipitated	21	29
Cerium Oxalate	53	41	Extract of Opium	15	35
Antiseptic Solution	79	6	Compound Powder of Acetanilid	3	26
Magma Bismuth	32	38	Gallic Acid	9	47
Syrup of Hypophosphites Com- pound	26	32	Fluidextract of Grindelia	12	18
Acid Nitrohydrochloric Dilute	21	32	Tincture of Cannabis	3	44
Wine of Colchicum Seed	18	24	Bismuth Beta Naphthol	3	38
Sodium Perborate	56	18	Syrup of Blackberry	6	9
Hamamelis Water	50	29	Quinine Salicylate	3	35
Ammonium Iodide	12	56	Syrup of Hypophosphites	12	26
Syrup of Acacia	15	21	Aromatic Powder	18	38
Dilute Solution of Lead Sub- acetate	15	62	Fluidextract of Viburnum Pruni- folium	9	35
Extract of Ergot	18	26	Zinc Phenol Sulphonate	12	18
Morphine (Alkaloid)	15	3	Vegetable Cathartic Pill	26	18
Wine of Ipecac	6	44	Lemon Juice	6	12
Fluidextract of Nux Vomica	24	21	Nitrohydrochloric Acid	9	21
Compound Spirit of Ether	24	62	Tincture of Cimicifuga	3	18
Tincture of Gelsemium	6	47	Fluidextract of Gentian	21	21
Extract of Gentian	9	32	Extract of Digitalis	9	29
Dilute Hydrocyanic Acid	15	41	Santonin	6	15
Fluidextract of Wild Cherry	24	15	Fluidextract of Podophyllum	3	21
Lithium Citrate	3	21	Syrup of Calcium Lactophos- phates	3	26

SALE BY MANUFACTURERS.

An effort was made to learn how frequently the items on the questionnaire were sold by manufacturing pharmaceutical houses, which were members of the A. D. M. A. The replies were prompt but the majority reported no sales and several only indicated an occasional sale for three or four of the items.

COMPARISON OF USE WITH SIMILAR U. S. P. X PRODUCTS.

To still further determine relative importance, the use of several deleted substances having a therapeutic action similar to a product still official in the U. S. P. were compared with the reported frequency of use of these in the Charters' Report. This study should be elaborated but as an example of the procedure, we give the following:

	Percentage of use in Charters' Report.	Percentage of use as shown by the Questionnaire.
Sodium Bromide	100%—631 times in 17,577 prescriptions or 8518 in 237,853 prescriptions	
Strontium Bromide		1594 times in 237,853 prescriptions or 20% of Sodium Bromide usage
Fluidextract of Ergot	100%—116 times in 17,577 prescriptions or 1566 in 237,853 prescriptions	
Extract of Ergot		514 times in 237,853 prescriptions or 33% of Fluidextract of Ergot usage

ADDITIONS TO THE PHARMACOPŒIA.

A feature of the Questionnaire was the request that those who returned it should suggest such new titles as they believed should find a place in the U. S. P. XI. The following titles have been proposed and are arranged in the order of frequency of suggestion; the one most often mentioned being first.

Ephedrine—32	Syr. Cocillana Comp.—4
Ephedrine Solution—26	Neo Cincophen—4
Ephedrine Hydroch.—12	Diphtheria Toxin-Antitoxin for Test—4
Ephedrine Salts—11	Acriflavine—4
Ephedrine Sulph.—9	Sulph-Arsphenamine—3
Ephedrine Inhalant—8	Metrazol—3
Ephedrine Syrup—3	Ichthyol—3
Ephedrine Inhalant Comp.—2	Merbaphen—3 (Novasurol)
Insulin—23	Pyridium—3
Mercurochrome—17	Corpus Luteum—3
Liver Extract—14	Elix. Lactated Pepsin—2
Hexylresorcinol—9	Potassium Sulphocyanate—2
Metaphen—9	Psyllium Seeds—2
Irradiated Ergosterol—8	Arsphenamine—2
Neo Silvol—6	Calcium Gluconate—2
Elix. Phenobarbital—5	Sodium Tetraiodo Phenolphthalein—2 (Tetra- phthalein Sodium)
Viosterol—4	Heroin Hydrochlor.—2
Sodium Phenobarbital—4	

The following items were each suggested *once*:

Acriflavine Hydrochlor.	Cerium Oxalate
Acriviolet	Chloretone
Adrenal Preparations	Chlorylene
Agarol	Choline
Allonal	Citrocarbonate
Amytal	Collyrium Astringens (German Pharm.)
Aspidospermine Crystalline	Dial
Aspidospermine Amorphous	Digalin
Atophan	Elixir Alurate
Benzyl Benzoate	Emulsion Silver Iodide
Bromural	Ergotamine
Butyn	Ethylene for Anaesthesia
Calamine	Ethylene Tetrachloride
Calcium Iodide	Euresol
Carbon Dioxide Gas	Glycerophos. Comp.
Caroid	Ichthyol

Iron Quinine and Strych. Phos. Elixir	Quinine Di-Hydrobromide
Lotio Alba	Salipyryn
Magnesium Super Oxyl.	Salophen
Manganese Butyrate 20% Sol.	Salysal
Melatone	Sodium Amytal
Milk Powder Dry	Sodium Fluoride
Mixture of Rhubarb and Soda	Sodium Salicylate (True)
Novaspirin	Tannalbin
Orthoform	Theobromine Sodium Acetate
Ovarian preparations	Theophylline Sodium Acetate
Oxytocin	Thyroid preparations
Phenol Tetraiodo Phthalein	Tolysin
Phenyl Azo Diamine	Validol
Potassium Guaiacol Sulphonate	Vasopressin

CONCLUSIONS.

This effort to determine the present-day importance of substances omitted from the Pharmacopœia during the last two decades, has not received the support hoped for but the results are indicative and valuable and should aid the next Subcommittee on Scope in determining omission or deletion in a few of those instances where doubt has been expressed or in any instance in which errors may have been made due to insufficient information.

CHARACTER AND PURPOSE OF THE UNITED STATES
PHARMACOPŒIA.*

BY J. H. BEAL.¹

For more than a century—to be exact, for a hundred and ten years—an enterprise has been carried on in the United States which, measured by its importance to the life and health of the nation should be of great public interest, but which remains practically unknown, even by name, to all but a comparatively small fraction of the population.

This enterprise, known as the United States Pharmacopœia, and the society responsible for its periodical revision and publication, the United States Pharmacopœial Convention, pass their one hundred and tenth anniversary this year, and both are of greater vigor and importance to-day than at any previous time in their history.

Prior to the first U. S. P. there was, in America, no authoritative list of approved medicinal agents, and no generally accepted system of drug nomenclature. Widely different drugs and preparations were often designated by very similar names, while sometimes the same drug was known by several different names, and consequently, there was no assurance that an article supplied on prescription would be the same as that intended by the prescriber, or something of very different composition and potency. To correct this dangerous confusion and to introduce certainty into the compounding and dispensing of medicines the United States Pharmacopœia was instituted.

* An address before the National Association of Retail Druggists, Atlantic City, Sept. 16, 1930.

¹ Chairman U. S. P. Board of Trustees, Camp Walton, Florida.