In the group of cardiac stimulants the frequency with which ephedrine is prescribed is probably due more to its action on mucous membrane than to its effect on the heart. It has become a very valuable ingredient of nasal sprays and similar preparations intended to allay irritation.

Although camphor leads the group of intestinal antiseptics it is used for so many diverse purposes that salol may in reality be considered the most popular member of this group.

Among the group of diuretics, citrated caffeine owes its popularity largely to its common use along with the antipyretics to aid in elimination. Diuretin, the only other compound of this class commonly prescribed, is very similar in action being a theobromine derivative related closely to caffeine.

Menthol being a compound similar to camphor in respect to its numerous uses renders any attempt to place it in the group of antineuralgies inaccurate. Thus the high percentage of total synthetics which it represents is not a fair indication of the prevalence of this group.

The best examples of synthetics offering specialized therapeutic action are to be found in the group of anæsthetics. Chloretone is an excellent local sedative and anæsthetic for general internal and external use; chloroform is a common agent for the alleviation of bronchial and throat irritation; novocaine offers every advantage in dental anæsthesia; holocaine is an excellent anæsthetic in ophthalmic surgery; and anæsthesin is widely used as a dusting powder for painful wounds. Little or no duplication is to be found in this group which offers a good example of the value of modern synthetics to prescription practice.

There is no apparent reason for the absence of such popular synthetics as urotropin, salvarsan and adalin although the infrequency of synthetic laxatives is best accounted for by the highly advertised proprietaries and the confidence of the public in the old-fashioned preparations.

## SUMMARY.

- (1) Survey of 3400 prescriptions completed.
- (2) Synthetics classified as to frequency of occurrence.
- (3) Criticism of duplication of antipyretics and hypnotics.
- (4) Advantages and disadvantages of several factors in the success of synthetics discussed.

## THE STATUS OF OFFICIAL AND NONOFFICIAL PREPARATIONS IN PRESCRIPTION PRACTICE.

## BY WALTER D. STROTHER.\*

In 1927 Charters¹ published the results of a survey of pharmacy in the United States. Among many other facts studied and analyzed, he and his co-workers read over seventeen thousand physicians' prescriptions. In this report he gives a complete list of every preparation used in compounding these prescriptions. The survey covered various business centers in the United States so the results represent fairly accurately just what drugs were in use at that time. In addition to the name, the number of times each preparation occurred was tabulated.

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<sup>1 &</sup>quot;Basic Material for a Pharmaceutical Curriculum."

In the majority of schools of pharmacy, to my knowledge, no provision is made for teaching the properties and uses of a great many of these preparations found in common use. Some institutions are offering courses which deal with the chemistry and properties of the new synthetics which have promise of becoming useful to the medical profession. It seems to me that in the formulation of the new four-year course which is about to be offered as the minimum requirement for a degree in pharmacy, some provision should be made to include more of the commonly used nonofficial preparations. I have reference not only to the synthetic chemicals but also to preparations composed of ingredients which are recognized as being useful and in common use.

Students, studying pharmacy, frequently ask questions concerning the ingredients and properties of drugs physicians are prescribing. Teachers of materia medica and dispensing pharmacy are the logical ones for these students to go for aid. It is necessary, therefore, for the teacher to keep himself informed regarding the preparations the medical profession has accepted as having virtues worthy of use. Realizing the need of such a list I made a survey of 2500 prescriptions written by physicians in the City of Columbia, and covering the period from January first to November fifteenth of the past year (1930).

I have tabulated below the results of this survey according to the frequency of each class of preparations.

	U. S. P.	N. F.	Non- official.		U. S. P.	N. F.	Non- official.
Acids, organic	190			Pills	7	5	1
Acids, inorganic	28	1		Powders	1		
Waters	45	1		Spirits	21	3	
Elixirs	9	48	81	Syrups	33	10	12
Extracts	5			Tinctures	195	5	
Fluidextracts	49	3	2	Synthetic chemicals	239		67
Liniments	7			Other organic chemica	als 770	2	2
Liquors	27	5	12	Inorganic chemicals	232	6	26
Lotions		11		Vegetable drugs	57		
Magmas	3	10		Ointments	32	4	7
Masses	1	• • •		Animal products	13		
Mixtures	1	27	1	Unclassified			646
Mucilages	1						
Vegetable oils, fixed	1						
Volatile oils	15		1	Total	2002	141	848
Mineral oils	20		• • •	Per cent	66.94	4.71	28.35

We often hear statements made to the effect that doctors are prescribing proprietary remedies much more now than at any time in the past. According to the Charters' survey, 80 per cent of all preparations used in prescriptions were U. S. P. or N. F. The local survey made here closely approximates the figures obtained by Charters. While the figures show an increase in the percentage of proprietaries used now and three years ago, the number surveyed is not as large and, therefore, probably not as accurate as the survey covering the larger number. Nevertheless the results obtained would indicate that physicians are still adhering fairly closely to the U. S. P. and N. F. It will be noted, however, that nonofficial preparations are prescribed about six times as often as those in the National Formulary, but probably do not receive one-sixth as much consideration

as those listed in this book. It would, therefore seem logical, since it is the business of the schools of pharmacy to see that students become familiar with the properties and uses of drugs, that at least the more important nonofficial preparations should be tabulated and studied.

It is true many of the proprietary remedies consist of ingredients that are common and their virtues well known; examples of which are readily recalled by members of the A. Ph. A. Pharmacists are frequently heard to complain because they have to carry in stock all these remedies camouflaged under some trade name, when the physician might have just as well written a prescription for the active constituents he desired his patients to have and which the pharmacist already has on his shelves.

The average pharmacist works long hours and finds little time to devote to activities outside of the store. He, therefore, complains of his lot in life and makes little effort to correct it. He has remained faithfully on the premises of his shop, while the manufacturing drug companies have sent out their detail men to persuade the physicians to write prescriptions for their individual products instead of the ingredients used in making the preparations.

Occasionally one reads about some progressive pharmacist who, in planning his work for the week, makes some provision to have one afternoon free to detail the physicians in his town, or if in a large city those who would likely write prescriptions which might find their way to his store. He tells the physician about the official preparations and explains to him the duplication in many of the remedies drug firms are forcing on the market. This type of pharmacist is going to win the confidence of the physician and further he is going to increase his prescription business. If this is true, it has occurred to me that some arrangements could be worked out among pharmacists in their local or state organizations whereby a more general campaign might be made to instruct the physicians as to the contents of the U. S. Pharmacopæia, National Formulary and New and Nonofficial Remedies, with the idea in mind of curbing the prescribing of superfluous nonofficial preparations.

Very recently I was told by a pharmacist that a physician seeing the abbreviation N. F. on a standard remedy, inquired what the letters stood for. Later in conversation with another physician, I learned he also was in ignorance as to the contents of the two standard books published primarily for the pharmacist and the prescribing physician. If this condition is common and the medical schools do not find time to instruct their students as to the contents of the United States Pharmacopæia and National Formulary, then the druggist must make some effort to acquaint the physician with the preparations recognized by his profession as standard. The coöperative doctor should be grateful for this information.

## BUSINESS METHODS, WEST INDIES.

Certain trade distinctions drawn in the United States as to the manner in which a firm shall conduct its business do not prevail in many sections of the West Indies. In Curacao a firm importing medicinals can be a manufacturer's representative, agent, importer, wholesaler and retailer at the same time and the carrying of lines of competing medicinals and pharmaceuticals is not considered improper. If an American manufacturer insisted that his Curacao representative do business according to certain American practices, he would experience difficulty in attaining coöperation. (Consul Thomas W. Voetter, Curacao.)