

ON ABBREVIATIONS IN PHARMACOPŒIA (U. S. P. X) AND NATIONAL FORMULARY (N. F. V). II.*

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At our 5th Annual Meeting held in St. Louis last summer, I presented a paper, "On Abbreviations in Pharmacopœia (U. S. P. X) and National Formulary (N. F. V),"¹ and showed numerous inconsistencies in abbreviating the same word, and also in abbreviating different words with the same endings. Not only are inconsistencies observed, when abbreviations in the Pharmacopœia are compared with those of the same words in the Formulary, but each of these authorities has its own quota of inconsistencies. It was then suggested that I make a study of some of the actual abbreviations used by physicians, and present my findings at this, the 6th Meeting.

In order to do this, I selected a number of assistants. As a consequence, I had the city fairly well divided. These assistants made lists of the abbreviations they found on prescriptions that came to their notice, and later handed them to me for final tabulation. I secured also another worker in New Jersey. His reports were much like those received at home, so much so, that I suspect my findings represent not only the condition found in Baltimore, but also fairly well that in the East.

The number of prescriptions studied was about 10,000. The number of physicians represented was more than 150. It would have been better to have made this study by tabulating physicians, rather than prescriptions, but this was a little more of an undertaking, and I hesitated to request this of my assistants.

I soon realized that the great majority of articles in the Pharmacopœia are not prescribed at all, and this applied to a greater extent to articles in the National Formulary. The list of articles prescribed by any one physician is, of course, very limited. This is also true for a locality, and even for a particular time. As to abbreviating these articles, each physician is a law unto himself; he abbreviates to suit himself, and all that he is interested in is to get the article that he prescribes. And so one finds that it is the more common names that are abbreviated in various ways, and at variance with those given in the United States Pharmacopœia and National Formulary. The unusual names, and the more difficult to write, are seldom wrongly abbreviated, since they are usually written out in full. Included in this list are those with long unwieldy names that the physician fights shy of using, and, if he prescribes them at all, he uses the trade name, as for example, salol, urotropine, etc. Many physicians now use the English official names, not only for these long unwieldy names, but for all names. A list of the names used is, upon the whole, a small one, probably less than 200. Of these, there are some that I found always correctly abbreviated, that is, abbreviated as in the Pharmacopœia and the Formulary; such are the following: ACACIA—Acac., ARSENITIS—Arsen., ATROPINA—Atrop., AQUA—Aq., BENZOAS—Benz., BICARBONAS—Bicarb., CAFFEINA—Caff., CITRICUM—Cit., CHLOROFORMUM—Chlorof., COCAINA—Cocain., COPAIBA—

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¹ *Am. J. Pharm.*, 9 (1927), 624-628.

Copaib., DIGITALIS—**Digit.**, DILUTUM—**Dil.**, FERRUM—**Ferr.**, LINIMENTUM—**Lin.**, LIQUOR—**Liq.**, LITHIA—**Lith.**, MAGNESIA—**Mag.**, MORPHINA—**Morph.**, OLEUM—**Ol.**, PETROLATUM—**Petrolat.**, STRYCHNINA—**Strych.**, SUBNITRAS—**Subnit.**, VIBURNUM—**Viburn.**, VINUM—**Vin.** Why these should be correctly abbreviated, and others equally simple are not, is not clear.

I will now take up those abbreviated not only as given in our official standards, but in various ways. Thus ACIDUM, as also noted among the inconsistencies in the National Formulary, was sometimes abbreviated by physicians **Ac.** A rough estimate of the proportion of the times the word was abbreviated **Ac.** to the times it was abbreviated **Acid.** is as 3:1. AMMONIUM, which is abbreviated **Ammon.**, was abbreviated more frequently **Am.** or **Amm.** I found it abbreviated correctly only once out of every ten times. AQUA, as already stated, was abbreviated correctly **Aq.**, whenever it was abbreviated, but AQUA DESTILLATA was almost always abbreviated "Aq. Dist.," instead of **Aq. Dest.**; in less than 5% of the times was it abbreviated correctly. AROMATICUM was most frequently abbreviated **Arom.**, but occasionally, as also noted among the inconsistencies I called attention to in my previous article, it was abbreviated **Aromat.** BELLADONNA was very often written out in full. It was generally abbreviated "Belladon.," and sometimes "Bella." I found it abbreviated **Bellad.** only occasionally. Thus, in about 50% of the times was BELLADONNA abbreviated, and of these, it was abbreviated **Bellad.** but 10% of the times. BISMUTH, when abbreviated was most times abbreviated **Bism.**, but occasionally it was abbreviated "Bis." BROMIDUM was abbreviated "Br.," "Bromid.," and **Brom.** In about 60% of the times it was abbreviated **Brom.**, as is sanctioned by the U. S. P. CAMPHORA was abbreviated most times **Camph.** but "Camp." was also occasionally seen. CAPSICUM, the Pharmacopœia says, should be abbreviated **Capsic.**, but I found it most often abbreviated "Caps." CARDAMOMUM, likewise, which should be abbreviated **Cardam.**, was almost invariably abbreviated "Card." However, this inconsistency is also noted in the National Formulary. CASCARA SAGRADA, I found abbreviated "Cas. Sagr.," "Cas. Sagrada," and "Cascara Sag.;" **Casc. Sagr.**, as sanctioned by the Pharmacopœia, was seen only occasionally. CHLORIDUM, which is most often abbreviated **Chlor.** in Pharmacopœia and Formulary, I found not only abbreviated this way, but also "Chlorid.," "Chl.," "Cl.," and "Mur." It was rather difficult to say which abbreviation was most popular. CINNAMOMI was generally abbreviated **Cinnam.**, but I found it abbreviated also "Cin." CITRATIS, I found abbreviated "Citrat." and **Cit.** The latter is the one recommended. The abbreviation is also the one for CITRICUM, and when thus used, is always used correctly. In other words, there seems to be a tendency to use "Citrat." for CITRATIS, and **Cit.** for CITRICUM. COCILLANA was abbreviated **Cocillan.**, and also at times "Cocill." This is an inconsistency also noted in the National Formulary. CODEINA should be abbreviated **Codein.** I found it most times abbreviated "Cod.," and when not abbreviated, the English name "Codeine" was used. "Codii" and "Codia" were also used. Compositus, a or um, was abbreviated "Comp." slightly more frequently than **Co.**, which is the official abbreviation. CREOSOTUM was generally written "Creosote."

EFFERVESCENS was abbreviated either "Effer.," or **Eff.** ELIXIR was generally abbreviated correctly **Elix.**, but I saw it also abbreviated "El.," and "Elix." ERGOTA, I found was most often written in English "Ergot," which happens to be also the correct abbreviation. I found it abbreviated also "Erg." EXSICCATUM was abbreviated "Ex." more often than **Exsic.**, which is the accepted abbreviation. EXTRACTUM, I found abbreviated "Extr.," "Ex.," and **Ext.**, the last being the official abbreviation. FLUIDEXTRACTUM was abbreviated in a great variety of ways, thus "Flect.," "Fl. Ext.," "Fl. Ex.," "F. E.," "Ext. Fl.," "Fluid Ext.," besides **Fidext.** The most popular way was "Fld. Ext." GENTIANA was always abbreviated "Gent." HYDRARGYRI was generally written out in full. The following abbreviations, however, were observed also: "Hyd.," "Hydrar.," "Hydg.," and **Hydrarg.**, which is official. Less than 50% were abbreviated correctly, when abbreviated. HYDRAS should be abbreviated **Hyd.**, but I found it just as frequently abbreviated "Hydr." HYDROCHLORICUM was abbreviated most times "Hydrochlor." Less than 5% of the times was it abbreviated **Hydrochl.** This is just the reverse of the condition noted in the Pharmacopœia. HYOSCYAMUS, when abbreviated, was seldom abbreviated **Hyosc.**, as recommended in the Pharmacopœia, but either "Hyos.," or "Hyoscy." IODIDUM was generally abbreviated correctly **Iod.**, but occasionally "Iodid.," and sometimes simply "I.," was used. **Ipecac** is the official abbreviation for IPECACUANHA. This, too, was generally used, and sometimes, "Ipec." LACTOSUM was only occasionally prescribed by that name. More often, it was prescribed as "Sac. Lact.," or "Sacch. Lactis," abbreviations for its old official name Saccharum Lactis. "Limonis," in LIMONIS CORTEX, was invariably prescribed as "Lemon," or "Lemonis." Here it is quite evident that the prescriber did not know the Latin name. MENTHA was generally abbreviated correctly **Menth.**, only occasionally did I find it abbreviated "Ment." MENTHOL, likewise, was generally abbreviated correctly, and only occasionally did I find **Menth.** or "Ment." used. As to the word *Misce*, it frequently was written *Mix.*, instead of simply *M.* MISTURA, was generally correctly abbreviated "Mist.," although "Mxt.," I found sometimes used. MORPHINA was generally correctly abbreviated **Morph.**, however, I saw it often written "Morphine" or "Morphia." MUCILAGO was abbreviated "Muc." or **Mucil.**, the latter being the correct way. NUCIS VOMICAE was just as often abbreviated "Nux. Vom.," as **Nuc. Vom.** OLEUM, I found always correctly abbreviated **Ol.**, but OLEUM MORRHUÆ, I found abbreviated "C.L.O." OXIDUM was abbreviated most times **Oxid.**, but sometimes it was abbreviated "Ox." PEPSINUM should be abbreviated **Pepsin.**, I found it abbreviated also "Peps.," and "Pep." PHENOL is not abbreviated, and I found it most times written that way. Occasionally, it was prescribed as "Carbol. Acid." PHENYLIS SALICYLAS was most often prescribed as "Salol," although **Phenyl. Salicyl.** was also used. PHOSPHAS was abbreviated most times **Phos.**, and only occasionally "Phosph." PILULAE was abbreviated **Pil.**, which is correct, and "Pill.," the latter most frequently. POTASSII was abbreviated about 50% of the times correctly **Pot.**; about 40% of the times, it was abbreviated "Potass.;" the remaining 10% was distributed among "Kali.," "Kal.," "Potas.," or "Potas." PRAECIPITATUM was generally abbreviated "Praecip.," and only

occasionally **Praec.** PULVIS was abbreviated **Pulv.**, "Powd.," "Pul.," and simply "P." There is quite a tendency to write the names now in English, and "Powd." appeared oftener than **Pulv.** QUININA was abbreviated generally correctly **Quin.**, but "Chinin." was also often found. RESORCINOL is abbreviated **Resorcin.** I found, besides **Resorcin.**, also quite often "Resorsin." SUCROSUM abbreviated **Sucros.**, was not often seen. It was generally prescribed as "Saccharum," which was abbreviated "Sacch.," "Sach.," and "Sac." SALICYLIAS was generally abbreviated correctly **Salicyl.** SODII should be abbreviated **Sod.**, and was abbreviated that way most times. I found it abbreviated also "Nat.," "Natri.," "Na.," and sometimes "Soda." SODII BORAS, I found frequently prescribed as "Sod. Bibor." SOLUTIO was generally abbreviated correctly **Sol.**, but sometimes it was abbreviated "Solu." "S. T. Mist.," I learned was the abbreviation for Sore Throat Mixture. SPIRITUS, which should be abbreviated **Sp.**, I found abbreviated "Spir.," "Spr.," "Spt.," "Sprs.," "Spts.," and also "Ess." In less than 2% of the times was it abbreviated correctly. "Sprs." seemed to be the abbreviation most often used. SULPHAS, I found abbreviated most often either "Sul.," or "Sulp." In only about 10% of the times was it abbreviated correctly **Sulph.** SYRUPUS was abbreviated correctly most times **Syr.** I found it also abbreviated "Sy.," and "Sr." TABELLAE was generally abbreviated correctly **Tab.** I saw it also abbreviated "Tabs." In TERPINI HYDRAS, I found Terpini frequently abbreviated "Terp.," instead of **Terpin.** THIOSULPHAS should be abbreviated **Thiosulph.**, but just as SULPHAS was abbreviated "Sulp.," so THIOSULPHAS was abbreviated "Thiosulp." THYMOLIS is abbreviated **Thymol.**, and this abbreviation I found generally used, and only occasionally "Thym." TINCTURA, I found abbreviated **Tr.**, "Tinct.," "Tct.," "Tctr." and "Tinc." It was most often abbreviated **Tr.**, which is the abbreviation recommended in both Pharmacopœia and National Formulary. "Tinct." was used about one-half as often as **Tr.** UNGUENTUM was abbreviated **Ung.**, "Oint." and "Ungt." It was abbreviated just as frequently "Oint.," as **Ung.**, and only about 5% of the times "Ungt."

Just why we have this diversity in abbreviations among physicians is, no doubt, because no attempt has ever been made to teach them how the various articles in the Pharmacopœia and the National Formulary should be abbreviated. It is even likely that most physicians do not know of this feature in Pharmacopœia and Formulary, that, in them may be found so-called official abbreviations, which for the sake of uniformity should be used. Of course, it may be a question whether uniformity is desirable. However, upon the whole, it seems that it would be, if for no other reason than to eliminate all chance of any uncertainties. Now, if this is worth any consideration, abbreviations in the Pharmacopœia and in the National Formulary must be consistent, and every effort should be made to have them so. Further, it would seem also worth the effort to have the attention of our various medical schools called to this feature in the United States Pharmacopœia and in the National Formulary, with the recommendation that their students be taught, that when abbreviating any of the various articles in a prescription, it is imperative to use the abbreviations sanctioned by authority, and to abbreviate them as they are abbreviated in these two works of authority.