Papers Presented to Local Branches

PREPARATIONS OF THE NEW U. S. P.*

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The comments which follow are made with the understanding on the part of the writer, that the *text* in the Pharmacopœia should be *concise,* of *positive value* (not valueless or non-essential), and so worded as to exclude all opportunity for quibble or legal interpretation, wherever such an ideal is obtainable.

Following the preparations, in the order published in the April number of the *Journal,* my attention was directed to the requirements for "Aqua."

Using a dilution of Tr. Ferric Chloride with water, (representing Iron, 1-100,000), as test solution, and applying freshly prepared H_2S water, somewhat cloudy with Sulphur, no noticeable change in color or turbidity was shown in several hours; heavy metals should show darkening in 15 minutes, according to the text. This test was made to determine if Iron could be detected by this test, when present in small amounts. On adding Ammonia water, a dark coloration was produced immediately. This is a requirement of the present "U. S. P." heavy metals test.

In the next test for the limit of iron, the statement "no blue coloration should be produced immediately (iron)," needs modification. Since, the application of this test to a 1-100,000 iron solution,—which, by the way, develops a marked color on aging,—does not give a positive result, interpreting the text strictly. It takes about half a minute for a green coloration to show, which develops into a definitely blue coloration in about one minute. This certainly is not "immediately," as any lawyer required to defend this condition would contend, and probably with success.

Iron dilutions of 1-500,000, show a blue coloration in from three and one-half to five minutes; dilutions of 1-1,000,000, show this color in from seven-ten minutes. It is recommended that a definite time be stated, instead of the word "immediately," if this test is to be retained.

It would appear that these two tests establish a *much less rigid* standard, than the present "U. S. P." "heavy metals" test, if experimental contaminations serve, as well as those found in nature, as a guide to test them. Under Aqua Destillata, the present standard allows 7.5 Mg. per 100 cc. and not 5 Mg., as reported by the committee in comparison with the new standard of 1 Mg. Thus making the allowable residue, 7.5 times smaller, instead of 5 times, as the published text shows.

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Aqua Destillata Sterilisata: The requirement that only "freshly distilled water" may be used, and the recommendation that it be used "within 48 hours," surely makes its preparation difficult, and expensive for emergency use. One queries why those responsible for the restriction, *"freshly,"* did not go the limit, and insist also on the, "all Jena glass" conditions, usually imposed by those claiming deleterious effects from products of less rigid manufacturing processes.

The medicated waters are all required to be made with recently boiled distilled water. Never having experienced any trouble with these preparations, I fail to see the reason for this, excepting the possibility that water, from which the air and CO_2 are removed, more readily takes up oils to saturation; or it may also be, that it is the purpose to sterilize the water just before using, to secure a better product. This latter, to insure success, requires bacteriological *technique* beyond the average pharmacist's attainment.

Liquor Sodii Chloridi Physiologicus: 8.5 gm. per litre, seems a rather large amount, especially when other salts are also added, to produce Ringer's or Locke's solutions. 7.5 gms.,—the mean between the extremes usually stated, namely, 0.6%-0.9% (from Howell's Physiology), may be less apt to produce hypertonicity than the higher amount. The hardship imposed by requiring freshly distilled water, holds also here and the recommendations regarding sterilization, I fear, will lead to many a dispute between Pharmacist and Physician should the former become the purveyor of this preparation to the latter.

For where there is infection,—where sterilized materials are employed, either instruments, dressings, suture materials, etc., or preparations,—the physician almost invariably seeks to put the blame on any other cause, however far-fetched his reasoning, rather than to ascribe bad results to his possible faulty *technique* or poor judgment. For the pharmacists' protection against accusations of this nature, the process of sterilization should produce unquestionable results, and the most thorough is none too safe. Therefore, I would recommend fractional sterilization—auto-claving from 15-20 minutes on three successive days at 115° to 120° C., or boiling for 1 hour on three successive days—allowing a shorter procedure only on the physician's explicit permission and by his direction. Also I would waive the requirement of freshly distilled water, proper keeping conditions being insisted upon for Aqua Destillata.

Liq. Sodii Arsenatis: The rubric states, "not less than 0.975%, nor more than 1.025%," but the assay requires "not less than 0.95%, nor more than 1.0%"; a discrepancy that ought to be corrected.

I cannot understand why Po. Ext. Cascara Sagrada should be directed to be made only three times the strength of the drug, when four times the strength is usually the requirement, for powdered extracts, and when most manufacturers make them of that strength. Surely pharmacists will not attempt manufacture of this extract when they are buying preparations more easily made.

The method of making Tr. Limonis Corticis and Tr. Aurantii Dulcis will probably meet with popular approval. The present "U. S. P." process for Tr. Nucis Vomicæ certainly insures a more reliable preparation, with the skill required for its manufacture, than making the tincture from the drug, with assay by the pharmacist, will probably produce.

GENERAL CONSIDERATIONS.

The alcoholic preparations of the Pharmacopœia,—fluidextracts, tinctures, spirits, etc., should have the alcohol-content of the finished product stated definitely, and so adjusted that reasonably close adherence to the process would be followed.

There seems to be a tendency to complicate and increase the work in many formulas, without any apparent equivalent gain in the results obtained, for example: Liq. Calcis, Liq. Cresolis Co., Liq. Magnesii Citratis, Spt. Menth. Pip, etc.

In closing, I wish to state that the revision of the preparations—and this may also be found true of the other parts of the book—seem too much "library-made" and not enough "laboratory-made." A thorough and practical revision could be made if the country's most expert talent could be utilized, at times to suit the individual convenience, during the *interim* of the decennial conventions, as workers in laboratories especially arranged for this purpose, housed by the A. Ph. A. Such laboratories should be located in or near some centrally situated metropolis. In such laboratories tests and processes of great value to the profession, could be worked out, to meet conditions of environment similar to those surrounding the pharmacists of the different sections of the country.

PENNSYLVANIA STATE LAWS OTHER THAN PHARMACY LAWS WHICH AFFECT THE RETAIL DRUGGIST.*

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The present era will probably be looked back upon by future historians as the "age of laws." Many laws are now upon our national and state statute books, which class as crimes, acts which in a former generation were looked upon as simply evidences of sharp business practice. These offences, now punishable by law, have been aptly termed "artificial crimes," because many of them are so technical in their character as to attach no moral disgrace to the individual found guilty of committing them.

The necessity for such laws has arisen on account of the complex relations brought about by our modern civilization, and in order to protect the honest, conscientious and upright individual from unjust and unfair competition on the part of those who are accustomed to look upon business from the standpoint of the old maxim *"Caveat emptor,"* and who do not realize that it has been superseded by the modern maxim *"Caveat vendor."*

In many instances fraudulent practices have been developed to such a high degree of perfection, that the buyer is no longer able to act as a competent judge of what he is getting without the aid of expert advice. It is true in some cases these laws work an even greater hardship upon those whom they are designed to protect, than upon those whom they are calculated to punish, but that they

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