

(4) The demerit system can be used effectively in work of this type because neatness, cleanliness and accuracy are essential to its success. If a student receives demerits for errors, unclean apparatus and working space, it soon becomes apparent what students are failing to do good work. The demerit system used embraces four major points, namely: (1) Neatness; (2) skill; (3) finished products; and (4) mistakes made in preparation.

(5) What student does not become interested in learning more about how to make new preparations and build new formulas? If there is a possibility of a new product, the work takes on new interest because of that creative spirit which is predominant in all of us. The production of new formulas has been satisfactorily used in our laboratory. The physicians in charge of the Student Health Service request a preparation for some particular use. The instructors are consulted and a careful check is made of those preparations which have been used for this purpose. Students can then be encouraged to work on new formulas and oftentimes new products are obtained having merit.

There are many aids in teaching this subject which could be suggested that can be used effectively. We are interested in new ideas and aids, but wherever the latent abilities of the students can be used effectively, then part of our teaching work has been a success, and the course will become more interesting to both student and instructor.

#### REFERENCES.

- (1) *Proceedings A. A. C. P.*, page 39 (1929).
- (2) *Ibid.*, page 49 (1935).

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#### MINIMUM EQUIPMENT FOR ESTONIAN PHARMACISTS.

BY OSCAR LODDY.\*

In recent years a number of state boards of pharmacy of this Union have made attempts to prescribe the minimum equipment for drug stores. In each case the required equipment usually has been limited to a few most essential things, such as prescription balance and weights, graduates, funnels, pill tile and spatulas.

It is interesting and instructive to compare our minimum equipment with that of Estonian pharmacies, the most progressive in Europe. Hereunder is the inventory of the minimum equipment and apparatus to be maintained by all the drug stores of Estonia, as per decree promulgated by the Department of Pharmacy of the government and reprinted in December 1937, issue of *Pharmacia*:

1 Distilled water still	1 Complex sieve
1 Tincture press	1 Pill machine
1 Prescription scale and weights	1 Cachet filler
1 Counter scale and weights	1 Capsule filler
3 Hand scales and weights	1 Alcohol lamp
1 Burner (Gas or otherwise)	Aerometers for estimating sp. gr.
1 Water-bath	Test-tubes and rack
1 Steam sterilizer	1 10X Magnifier
2 Percolators	1 Tripod

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| 2 50-cc. Burettes, divided into $\frac{1}{10}$ cc.    | porcelain dishes, stirring rods, glass tubing,  |
| 1 25-cc. Burette, divided $\frac{1}{20}$ cc.          | bottles, jars, boxes, etc.                      |
| 1 Cobalt glass  | In addition to above pharmacies of the first    |
| 1 Stalagmometer                                       | class must have also the following:             |
| 1 Pipette, 1 cc. divided into $\frac{1}{10}$ cc.      | 1 Analytical balance and weights                |
| 1 Pipette, 5 cc. divided into $\frac{1}{10}$ cc.      | 1 Volumetric flask, 50 cc. with glass stopper   |
| 1 Pipette, 10 cc.                                     | 1 Volumetric flask, 500 cc. with glass stopper  |
| 1 Platinum wire                                       | 1 Volumetric flask, 1000 cc. with glass stopper |
| 1 Thermometer from $-10^{\circ}$ to $+360^{\circ}$ C. | 1 Pycnometer, 5 cc.                             |
| 1 Thermometer graduated to $+120^{\circ}$ C.          | 1 Pycnometer, 25 cc.                            |
| 1 Apparatus for taking melting points                 | 1 Pipette, 20 cc.                               |
| 1 Apparatus for estimating congealing points          | 1 Pipette, 25 cc.                               |
| 1 Liebig condenser                                    | 1 Desiccator                                    |
| Ring and burette stands                               | 1 Separatory funnel, 100 cc.                    |
| 1 50-cc. cylindrical graduate                         | 1 Separatory funnel, 500 cc.                    |
| 1 200-cc. cylindrical graduate                        | 1 Apparatus for estimating boiling points       |
| Porcelain evaporating dishes                          | 1 Sand-bath                                     |
| 1 100-cc. volumetric flask with glass stopper         | 1 Ventilator box                                |
| Mortars, funnels, flasks, watch glasses,              |   |

*Manuale Pharmaceuticum III.* Compiled by PROF. RUDOLF WALLNER. Published by Estonian Pharmaceutical Association, Tallinn, 1937.

As the "Pharmaceutical Recipe Book II" is a valuable addition to the working tools of American pharmacists, so with the publication of the third volume of *Manuale Pharmaceuticum* Estonian Pharmaceutical Association has enriched the pharmaceutical literature of that country. This third volume completes the series of three volumes of recipes for the use of practical pharmacists of Estonia. The first volume, consisting of formulas of the Russian pharmacopœia, took the place for a number of years of a pharmacopœia until the Estonian Pharmacopœia was published in 1937. The second volume was devoted to more important formulas of foreign pharmacopœias, including those of the U. S. P. The last volume, consisting of 1385 recipes, is closely akin to The Recipe Book, being devoted principally to formulas of a technical and cosmetic nature, including many of those sold under trade names. Dental cements, creams, nasal ointments, dental drops, foot powder, hair tonics and numerous others find their adequate treatment in this volume. The author is a well-known Estonian pharmacist and drug official. Incidentally he had an interesting paper "Estonian Pharmacy Forges Ahead" for THIS JOURNAL in 1936.

#### PAPERS FOR THE SECTION ON PHARMACEUTICAL ECONOMICS.

The secretary of the Section on Pharmaceutical Economics, of the AMERICAN PHARMACEUTICAL ASSOCIATION, invites teachers of subjects coming under this division and other members of the ASSOCIATION, to contribute papers for the program of the Section to be presented in Minneapolis, August 1938. Individual studies and research reports on any related phases of subjects touching finance, law, psychology and art of pharmacy are desired.

For information pertaining to program and papers, prospective contributors are asked to communicate with Prof. Joseph H. Goodness, Massachusetts College of Pharmacy, Boston, Mass.

#### MEANING OF TERM "DRUG" UNDER FEDERAL FOOD, DRUG AND COSMETIC ACT.

Term "Drug" means (1) articles recognized in the official United States Pharmacopœia, Official Homeopathic Pharmacopœia of the United States or official National Formulary; or any supplement to any of them; and (2) articles intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease in man or other animals; and (3) articles (other than food) intended to affect the structure or any function of the body of man or other animals; and (4) articles intended for use as a component of any article specified in clause (1), (2) or (3); but does not include devices or their components, parts or accessories.