TABLE IV.—FORMULAS FOR THE ACETYLSALICYLIC ACID TABLETS CONTAINING CORNSTARCH, SOLKA-FLOC, AND DRY-FLO AS DISINTEGRANTS

	Starch	Dry-Flo	Solka-Floc BW 40
Acetylsalicylic acid	324.0	324.0	324.0
Cornstarch	32.4	..	..
Dry-Flo	..	32.4	..
Solka-Floc BW 40	..	..	32.4
Magnesium stearate	3.24	3.24	3.24

With Dry-Flo, a starch ester containing hydrophobic groups, no lubricant was necessary because of the splendid flow characteristics of this compound. Solka-Floc BW 40 is a white, purified, wood cellulose of a purity of 99.5% and an average particle size of 90 μ. This grade of Solka-Floc exhibited poor flow characteristics, and a lubricant was necessary.

Tablets of acetylsalicylic acid containing Dry-Flo as the disintegrating agent had a mean disintegration of 38.99 minutes, compared to 47.57 minutes for cornstarch and 54.56 minutes for Solka-Floc BW 40.

TABLE V.—DISINTEGRATION TIME IN MINUTES OF ACETYLSALICYLIC ACID TABLETS CONTAINING DRY-FLO, CORNSTARCH, AND SOLKA-FLOC AS DISINTEGRANTS IN SIMULATED GASTRIC JUICE

Disintegrant	Trials 1st	2nd	3rd	4th	5th
Dry-Flo	35.16	38.16	40.66	37.66	40.33
Cornstarch	36.33	54.00	54.23	46.16	47.16
Solka-Floc BW 40	50.16	57.33	54.83	55.50	55.00

of the absolute deviations from the mean and $(N - 1)$ is the number of degrees of freedom for a small sample, then $s = (X_1 - \bar{X})^2/N - 1$ (2).

The results of the disintegration tests of the tablets were analyzed statistically by the students "t" test and were found to be statistically[3] different from cornstarch at the 1% probability level.

Tablets of sodium bicarbonate containing Dry-Flo as the disintegrating agent had a mean disintegration time in artificial gastric juice of 2.16 minutes, compared with 3.28 minutes for tablets containing cornstarch as the disintegrant and 13.22 minutes for tablets containing Solka-Floc BW 40 as the disintegrant. All disintegrants yielded tablets which were white and smooth in appearance.

The disintegration of the sodium bicarbonate tablets was tested in simulated gastric juice U.S.P. and in distilled water to determine how much of the disintegration was due to the decomposition of the sodium bicarbonate by the acid media. In distilled water the tablets containing the Dry-Flo disintegrated in 2.76 minutes or 27% longer than in simulated gastric juice U.S.P. Sodium bicarbonate tablets containing cornstarch disintegrated in water in 6.40 minutes or 94% longer than in simulated gastric juice and the tablets containing Solka-Floc BW 40 disintegrated in 28.92 minutes in water or 111% longer than in simulated gastric juice U.S.P.

[3] In the statistical study the authors acknowledge the help of Mr. George O'Bleness, Director of the Computer and Statistical Division, Eaton Laboratories, Division of The Norwich Pharmacal Co., Norwich, N. Y.

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(1) "United States Pharmacopeia," 15th rev., Mack Printing Co., Easton, Pa., 1955, p. 936–938.
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Books

REVIEWS

Some General Problems of Paper Chromatography. Edited by I. M. HAIS and K. MACEK. Publishing House of the Czechoslovak Academy of Sciences, Prague, 1962. 220 pp. 17 × 35 cm.

A symposium was organized to cover the chemical structure of a substance and its behavior on a paper chromatogram and the mechanism of paper chromatography; the proceedings of the symposium are reported in this volume. A number of European scientists participated. Most of the papers and discussions have been translated from the original Czech, German, and Russian languages. The book should be of valuable assistance to pharmaceutical scientists who wish to explore the possibilities of utilizing more recent applications of paper chromatography in novel situations.

Specifications for Reagents Mentioned in the International Pharmacopoeia. World Health Organization, Geneva, 1963. U. S. agent: Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y. 267 pp. Price $6. French and Spanish editions in preparation.

A book of specifications for those reagents needed for testing the substances included in the "International Pharmacopeia" is presented. The volume covers about 400 reagents, ranging from the common mineral acids used in a multitude of tests to the complex organic compounds required for perhaps only one intricate assay, and represents a collaborate effort of pharmaceutical experts from all over the world. The specifications are designed to give the quality tests of the "International Pharmacopoeia" practical value by attempting to provide a worldwide reagent standard.