seed-coat is roughly constant during the same period of development of the nut. The compound ratio $\dfrac{K_1/F_1 \text{ ovule}}{K_1/F_1 \text{ seed-coat}}$ becomes unity on August 14th, which fact again makes that date a significant one.

6. The earliest history of the ovule would indicate a great preponderance of phosphatides over fats, which may be noted by an inspection of the backward extension of the phosphatide curve and that of fats in the ovule.

7. The phosphatides linger in the developing ovule until August 14th but their relative importance is insignificant after the fruit has changed from a limpid liquid to a jelly. This is the case with the seed-coat also, except that their importance seems to be nil after the June 28th sample.

8. By a back extension of the potassium curve, $K_1K_2K_3$, it will be seen that the early life of the ovule is conditioned by the presence of a relatively large content of potassium, which becomes less and less important as the fruit advances toward maturity but even on September 4th there is a content equal to 0.18% of the total solids.

9. The nature of the tissue of the seed-coat is such that it is either not penetrable by tannin or contains substances that · disrupt the tannin molecule into fragments that under one form or another are able to penetrate the tissue. The line of limitation of tannin penetration in the seed-coat is so clearly marked and yet the premises for a definit conclusion are so fragmentary that this feature of the physiology of the plant life deserves a special study before one should speak finally in reference to the role that fats and tannins play with reference to one another.

The author wishes to express his sorrow on account of the death of the late Dr. Waldemar Koch, whose kindly advice did much to stimulate the effort of this paper, and to thank Dr. William Crocker of the University of Chicago, for his friendly aid and criticism.

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CORRECTION.

On page 279 of the March number (4th line from the bottom) read *50 mm.* instead of *50 cc.*

On page 280 (last sentence on page) read: The value of K as calculated from its equation, $K = 1/t \log a/a - x$, points, as is seen, to a reaction of the first order with respect to the carbinol base.

NEW BOOKS.

Notes on Chemical Research. By W. P. DREAPER. 68 pp. P. Blakiston's Son & Co.

The work is reprinted from the *Chemical World;* of which the author is editor. In his words, it contains "an account of certain conditions which