

Amber	1
XMS-10023	1: 3
Hard rubber	1: 50-140

If, therefore, amber has a resistivity of $10^{-18}\Omega/\text{cm}$, XMS has about $3 \times 10^{-17}\Omega/\text{cm}$. The new material ranks very close to amber in its insulating qualities and will in many cases be a very good substitute for it. Its resistivity is equal to or perhaps a little higher than quartz, but the ease of molding it will make it superior to quartz. Whereas amber insulators are usually flamed to remove surface charges, XMS-10023 will charge itself when brought into the flame. Cleaning with alcohol will suffice to make it ready for use.

For atmospheric electric and Radon measurements the qualities of this plastic seem to be quite satisfactory.

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A NEW METHOD FOR MARKING SMALL LABORATORY ANIMALS

VARIOUS methods are utilized in different laboratories to facilitate the identification of individual animals. Large mammals, such as cats, dogs and rabbits, are frequently kept in individual living cages and under such conditions identification marks may not be needed. This is not always the case when an experimenter is using rats as his subjects. In many laboratories from ten to one hundred rats are kept in the same living cage and it is always useful and frequently essential to be able to select accurately one particular animal from this number.

Perhaps the most popular method of marking rats is that of mutilating the ears. Usually the ears are notched or perforated with a small punch. A third and less common procedure is to amputate the toes of the hind feet in various combinations, and even to cut off a portion of the tail. All the above methods have serious drawbacks if they are to be applied to a large number of rats which are to be marked for a long period of time. In addition to difficulties arising from healing and regeneration of the mutilated tissue, any one of these methods involves the necessity of teaching laboratory assistants the pattern of combinations used to designate the various numbers.

The writer has found that one extremely simple and practical method of marking rats is to tattoo the identification numbers in the ear. The principle of the machine used is very simple and the laboratory worker can construct his own tattooing outfit. However, machines can be purchased so cheaply that it is scarcely worthwhile to attempt their construction. A machine used to mark rats in this fashion can be purchased in any large city for \$3 or \$4 in an establishment where tattooing is performed. The apparatus

is that used to tattoo designs in human flesh. The most satisfactory material for putting the numbers in the ear is india ink.

In the writer's laboratory are several animals with identification numbers tattooed in their ears six months previously. These marks show no signs of fading, and experience with designs tattooed in human skin indicates that a number once tattooed into the rat's ear will remain legible throughout the animal's lifetime. The application of this method of marking is of great assistance if one wishes to keep a genetic record in connection with breeding in the colony. Young rats can be marked for life at the time of weaning.

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THE USE OF COTTON TO ABSORB BLOOD FOR CHOLESTEROL EXTRACTION

THE determination of cholesterol in blood with the micro extraction apparatus previously described¹ is facilitated by substituting absorbent cotton for the filter paper. A quantity of absorbent cotton is washed several times with fresh portions of chloroform and dried in the air to remove fatty contaminants. A small piece of cotton is tamped into the extractor with a glass rod. The upper end of the cotton should be about 2.5 cm from the open end. The tip of the blood-filled pipette is firmly pressed into the cotton, which then absorbs the blood quantitatively. A second, smaller piece of cotton is tamped against the blood-soaked cotton, and the drying and extraction are performed according to the original directions.

The apparatus now has a cylindrical glass shield. This protects the extraction tube from draughts and permits the operation of the heating element with a smaller current, thereby prolonging its life.

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BROOKLYN, N. Y.

¹ SCIENCE, 86: 477, 1937.

BOOKS RECEIVED

- CEATHORNE, A. R. and E. B. LYTLE. *Trigonometry*. Pp. ix + 95. 139 figures. Holt. \$2.00.
- CURTMAN, LOUIS J. *Qualitative Chemical Analysis*. Revised edition. Pp. xii + 514. 44 figures. Macmillan. \$3.75.
- ECKELS, CHARLES F., CHALMER B. SHAVER and BAILEY W. HOWARD. *Our Physical World*. Pp. xi + 801. 436 figures. Sanborn.
- ELBERTON, W. PALIN. *Frequency Curves and Correlation*. Third edition. Pp. xi + 271. Cambridge University Press, Macmillan. \$3.75.
- HOGNESS, T. R. and WARREN C. JOHNSON. *Elementary Principles of Qualitative Analysis*. Pp. x + 325. 27 figures. Holt. \$1.40.
- Organon; International Review, II*. Pp. 302. Mianowski Institute for the Promotion of Science and Letters, Warsaw.
- WEST, GEOFFREY. *Charles Darwin*. Pp. xiv + 359. 8 plates. Yale University Press. \$3.50.
- WOLFENDEN, J. H. *Numerical Problems in Advanced Physical Chemistry*. Pp. xx + 227. Oxford. \$2.75.