

PUBLIC HEALTH

Permit Lipstick Colors

► ELEVEN of the 13 colors previously banned for use in lipsticks, mouth washes, dentifrices or drugs are permitted temporarily in small amounts, or tolerances, under the new regulations issued by the Food and Drug Administration under the Color Additives Amendment to the Federal Food, Drug and Cosmetic Act. Ten of the 11 are lipstick colors.

Published in the Federal Register of Oct. 12, the regulations become effective immediately.

The color amounts to be used are based on recently completed two-year animal feeding tests on two representative colors that provide assurance that the temporary tolerances will be safe.

Extensive pharmacological testing must be done by the manufacturers or users of color additives to support listing.

The new regulations terminate the listing of the colors External D and C Yellows Nos. 9 and 10 for any use in foods, drugs or cosmetics. Under the designations FD&C Yellows Nos. 3 and 4, these colors had been previously banned for all food, drug and cosmetic uses except external uses in drugs and cosmetics.

Previously permitted coal tar colors may continue to be used in foods, drugs and cosmetics without restriction on the amounts used until necessary retesting is done, which may be two and a half years from July 11, 1960.

FDA says that the reason for termination of FD&C Yellows Nos. 9 and 10 for all uses is that these colors cannot be produced with assurance that they do not contain

beta-naphthylamine, a known cancer-inciting agent. There is no scientific evidence to support a safe tolerance for these colors on products to be used in contact with the skin.

FDA Commissioner George P. Larrick called a meeting of industry representatives and all other interested persons to discuss the responsibility for future tests.

He said FDA could not possibly perform all the testing required on colors during the two and a half year transitional period.

• Science News Letter, 78:263 October 22, 1960

BIOLOGY

Shuffled Cells Can Reconstruct Same Organs

► FOR THE FIRST TIME scientists have demonstrated that completely reshuffled cells, taken from the liver or kidney of chick embryos, can reconstruct the same organ without outside direction.

The new technique opens the possibility of further explorations by biologists who may use it as a clue to understanding disturbances of self-organization that lead to malformations and tumors.

Two Rockefeller Institute scientists, Drs. Paul A. Weiss and A. Cecil Taylor, report in the Proceedings of the National Academy of Sciences, 46: 1177, 1960, that they incubated the cells of each organ for a brief period in pancreatin, an enzymatic extract of the pancreas.

The chick embryos from which the organs were removed were from eight to

14 days of age, and were developed sufficiently to have bodily movement. (It takes about 21 days to hatch a chick egg.)

The scientists scrambled the cells from the removed organs (after stripping them of the physiological "glue" that binds them together) into a random mass and placed this on the surrounding membrane of eight-day-old chick embryos left to grow in their shells. In this way the graft received nutrition and blood supply.

After nine days of development, the professors removed the transplanted mass and studied sections under the microscope. They discovered typical miniature organs from which the cells had been taken.

Whatever the blood supply and chick membrane may have contributed to the advanced development of the formations they "certainly could have added nothing to make the liver cells reconstitute a typical liver; the kidney cells, a typical kidney; and the skin cells, feathers," the investigators observe. The blood supply and place of development were identical for all of them.

Other investigations have shown reconstruction of dissociated cells at the tissue level, but none have demonstrated reconstruction of such complex organs as Drs. Weiss and Taylor have reported. They have shown that whole organs can be formed from cells isolated at rather advanced stages.

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MEDICINE

Radioactive Seeds Check Breast Cancer

► HOPE FOR VICTIMS of rapidly spreading breast cancer is promised from experiments in which tiny, radioactive metallic seeds are planted in the pituitary gland.

An evaluation of a new and relatively safe procedure as a means of controlling this form of breast cancer is being carried out by a surgeon-endocrinologist-radiologist team at the University of California at Los Angeles Medical Center.

The team consists of Dr. Robert W. Rand, Paul H. Crandall, David Solomon, Alfred M. Dashe, Joseph L. Westover and W. Eugene Stern. The project is being supported by the U. S. Public Health Service.

Breast cancer, which spreads to the lymph glands and other parts of the body, requires certain hormones whose production is triggered by the pituitary in several glands, including the adrenals and ovaries.

The standard means of denying these hormones to the cancer is actual surgical removal of the pituitary gland, which has brought relief to some victims. The new method is being compared with the standard method in the current study.

Radioactive yttrium seeds can be placed in the pituitary with the help of precise instrumentation and techniques developed at UCLA.

The tiny metallic seeds are planted via a hollow needle that is inserted through the nose and sinus into the gland. The radioactivity of the seed destroys the gland.

The new technique has been used with 17 cases to date and continues to show promise.

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RADIO-CONTROLLED LOCOMOTIVE—All the functions of a normal diesel-electric locomotive will be controlled by a black box in the cab of the engine. Holding a transmitter for sending signals to the black box is J. W. Brauns of General Electric's Locomotive and Car Equipment Department in Erie, Pa.