CONCENTRATES

Science

Teratogenicity of phthalate esters . . .
Experimental evidence that phthalate esters are teratogenic has been disclosed by Dr. John Autian, director of the University of Tennessee materials science toxicology laboratory in Memphis. Phthalate esters, widely used as plasticizers for polyvinyl chloride, have previously been found in mitochondria of mammalian muscle cells and in human blood stored in PVC bags (C&EN, Nov. 8, 1971, page 7). Many scientists, he says, also believe that the esters are concentrated by the human body.

. . . supported by experimental evidence
Dr. Autian gave rats interperitoneal injections of six different phthalate esters—ranging from diethyl to di-2-ethylhexyl—at levels varying from 10 to 20% of each compound's LD_{50} (the dose level required to kill 50% of a sample population). In all cases he finds a high incidence of dead fetuses and general birth deformities in subsequent litters. He also finds that phthalate esters with the lowest molecular weight are the most potent teratogens. His results will be published in *Journal of Pharmaceutical Sciences* early this year.

Simple, low-priced test for gonorrhea
A relatively simple, low-priced test to screen for gonorrhea has been developed by Smith Kline & French Laboratories, Philadelphia, Pa., for use by physicians in their offices. The disposable Clinicult culturing system includes a specimen streaking device and a plastic paddle coated with a culture medium developed for preferential growth of *N. gonorrhoeae* bacteria. Colonies that develop within 48 hours are positively identified by oxidation of tetramethyl-*p*-phenylenediamine dye.

Library research division to reopen
The science and technology division of the New York Public Library has staved off fiscal disaster for at least a year. The division, a research center used by scientists around the world, closed its doors for the first two weeks of this year for lack of operating funds. But it will reopen Jan. 17 after a year-end fund drive—spearheaded by Mobil Oil Corp.—raised the $86,000 necessary for 1972 expenses.

Inhalation of aerosol propellents
Sudden death following inhalation of fluoroalkane aerosol propellents is apparently caused by the propellents themselves and not by anoxia, Dr. Nancy C. Flowers and Dr. Leo G. Horan disclose in the *Journal of the American Medical Association.* Dogs exposed to high concentrations of the propellents developed fatal disturbances of heart rhythms even when blood oxygen levels were held at or above normal. The dogs died even when exposure was stopped at the first sign of rhythm change, the physicians note, adding that the deaths resembled those caused by the structurally related halogenated hydrocarbon anesthetics.

Pills dissolve gallstones
Physicians at the Mayo Clinic, Rochester, Minn., have disclosed the first evidence that a drug can be used to dissolve cholesterol gallstones, a common ailment normally corrected by surgical removal of the gall bladder [*New England Journal of Medicine,* **286,** 1 (1972)]. The physicians gave four gallstone patients pills containing chenodeoxycholic acid, a minor steroidal component of human bile. The gallstones of one patient completely disappeared and those of the other three were markedly reduced in size.

Education

Fewer engineering freshmen
Freshman enrollment at U.S. engineering schools declined 16.8% this year, says Dr. Garland G. Parker, University of Cincinnati vice provost. Total enrollment at 1147 accredited schools reporting rose 3.2% to 6.06 million. However, freshman enrollment at the 980 schools reporting such figures dropped 0.7% to 887,000, only the third year-to-year decrease in 20 years. Those 980 schools reported 46,885 freshman engineers. Dr. Garland's annual survey of enrollment will appear in the February issue of the educational journal *School and Society.*

States increase outlays to colleges
State appropriations for higher education increased 24% in 1971–72 over 1970–71, according to a survey by the National Association of State Universities and Land-Grant Colleges, Washington, D.C. The largest increases went to state colleges and two-year schools, however; 71 of 94 major universities received percentage increases below the average for increases in their states. Five universities received appropriations lower than two years ago.

Technology

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Identifying origin of oil spills
A "fingerprint" file of oil samples, enabling identification of the origin of oil spills, is being developed by West Coast Technical Service, Inc., San Gabriel, Calif., which supplies oil-source identification services. The firm's analytical methods for comparison of oil samples are based on a procedure developed by the Western Oil and Gas Association, according to Dr. H. D. Fisher, West Coast's technical director. First, the oil is artificially weathered by distilling under an inert gas at 485° F. to remove volatiles. Gas chromato-

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J. R. Darby
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