

New Products and Equipment . . .

Economical Fly-Repellent Formulation for All-Around Use

Emulsifiable Concentrate F-21, a low-cost formulation based on Crag fly repellent and methoxychlor, can be used as a water spray, treadle-sprayer concentrate, or residual spray. It can also be used in back rubbers to control horn flies. This formulation is effective against all biting flies that attack cattle, including horse flies, because it contains a fly repellent, which not only repels flies, but also makes methoxychlor more effective.

Excellent results are claimed in tests with emulsifiable concentrate F-21 as a water spray, treadle spray, and residual spray. Tests also show that good control of horn flies can be achieved by using F-21 as a back-rubber concentrate.

Both Crag fly repellent and methoxychlor have been used safely on cattle for many years. Another advantage of this formulation is its stability, derived from Crag fly repellent and methoxychlor, both stable chemicals that will not break down in storage. **PE1**

Ready-Mix Standard Solutions

Ready-mixed ingredients for standard solutions are available from Chicago Apparatus Co. The solutions, called Stansols, are guaranteed to be accurate to 1 part in 1000. The solutions are packaged in polyethylene bottles. To prepare a standard solution the contents of the bottle are emptied into a volumetric flask, distilled water is added to volume the researcher is off—no muss, no fuss, no weighing. Just pour and use. **PE2**

Organic Intermediates

Three new organic intermediates which are now in commercial production at Millmaster Chemical Corp. They are Benzyl Ethylene Oxide, 1-Chloro-3-Phenyl-2-Propanol, and Benzyl Ethylene Glycol. It is suggested that mercapto derivatives or sulfones derived therefrom be evaluated as synergists and biocidal agents. The chlorinated amino alcohols or sulfones should similarly be of interest. Benzyl Ethylene Oxide is suggested as a stabilizer for chlorinated hydrocarbons and as an active diluent for epoxy resins. **PE3**

Pyrex Heat Exchanger

Production of a Pyrex brand shell and tube heat exchanger which is virtually impervious to corrosion has been announced by Corning Glass Works. The new type unit was developed especially

for processing industries where chemical resistance and product purity are primary considerations.

Field-tested for a year, the 50-square-foot capacity heat exchanger has proved to be highly efficient, versatile, and economical to install, operate, and maintain. Extreme operational flexibility is assured because working parts resist attack by all acids except hydrofluoric.

The new heat exchanger can be used as a condenser, a cooler or a heat interchanger. Product can be introduced in either the tube side, the jacket side, or both, and the unit can be changed readily from one process to another. **PE4**

Ethylene Dibromide, Methyl Bromide Space Fumigant

A new space fumigant, "Bromotox," is available from American Potash & Chemical Corp.

The product is a mixture of ethylene dibromide and methyl bromide, both of which have been used in the past to fumigate storage houses. However, tests have shown the new product to be more effective and cheaper to use than either

of its constituents in controlling pests in grain, flour, rice, cheese and dried fruits.

An example of the effectiveness of "Bromotox" was shown by 48-hour fumigating tests in which equal applications were made of ethylene dibromide, methyl bromide and "Bromotox," each applied in separate tests. Pest mortality for ethylene dibromide was approximately 72 per cent and for methyl bromide approximately 65 per cent, while the "Bromotox" resulted in 100 per cent mortality.

American Potash & Chemical claims that because of its effectiveness, the new product can be used at reduced dosages, thus resulting in lower cost application. **PE5**

Five New Naphthalene Derivatives Offered

Five alpha-substituted derivatives of naphthalene . . . alpha-Naphthalenemethanol (alpha-Naphthyl Carbinol), alpha-Naphthaldehyde, alpha-Naphthaleneacetonitrile, and alpha-Naphthaleneacetamide are available from Millmaster Chemical Corp. The dis-

Family of Lab Heaters Features Fast Response

The new family of fast response lab heaters available from Fisher Scientific Co. Sturdy open-wire heating elements are supported with a minimum of refractory assuring minimum of thermal lag. Fisher claims that the heaters will respond immediately to control settings. The family is composed of three models: the AllTemp, the StepTemp, and the MonoTemp. The AllTemp features a comprehensive range of temperatures. StepTemp is designed for operations requiring less heat but a duplication of previous settings; the heater is controlled in 7 steps. MonoTemp features a 550-watt heater with no controls. **PE6**

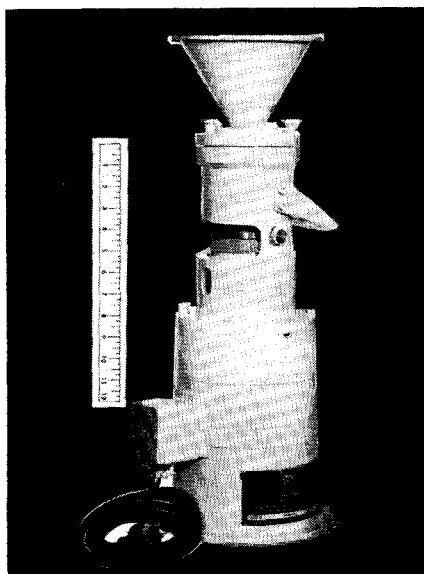


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tinctive properties of these compounds have suggested them for use as intermediates in new agricultural chemicals, and wherever else they may serve as possible improvements over their benzyl analogs.

Also available, in research qualities, are alpha-substituted derivatives of Naphthalenemethanol—such as mercaptan, thiocyanate, sulfonic acid salts, various amines (dimethyl and diethyl—alpha-naphthalenemethyl amine, for example), and a number of esters, ethers, and thioethers. **PE7**

Stainless Steel Research Mill



Small, light weight, all stainless steel mill for general research developed by Morehouse Industries. Unit was designed especially for product development, laboratory control work, and standardization of volume production formulas. High-speed, non-contaminating grinding discs are made of aluminum oxide. Motor is either explosion proof or totally enclosed, $\frac{3}{4}$ HP, available in two- or three-phase only, for practically any required voltage and cycle characteristics, for either continuous or intermittent operation **PE8**

Hydrogen Sulfide Generators

Hydrogen sulfide generators are available from the Girdler Co.

The process comprises the continuous reaction of hydrogen with sulfur at elevated temperature and pressure, recovery of the heat of reaction by heat exchange, and final sulfur removal from the hydrogen sulfide by cooling to the point that sulfur vapors are frozen out in alternating exchangers. Conversions of 95% or higher of hydrogen to hydrogen sulfide may be attained readily, the final purity of the gas depending in part on the purity of the feed hydrogen. Sulfur

utilization approaches 100%, the only loss being a small blowdown for ash removal.

The hydrogen sulfide generators are designed for continuous operation and require hydrogen at 80 psig at all times. Solid sulfur is charged to the unit intermittently. By installing an internal heater the generators may be operated intermittently if desired. Hydrogen sulfide is delivered at 70 psig normally. Higher operating pressures may be designed for if desired, in which case the feed hydrogen pressure must be raised accordingly.

Utility requirements for the hydrogen sulfide generator include 100 psig steam for sulfur melting and steam tracing, 80° F or lower cooling water, electric power for sulfur pumping and instrument air for controls. **PE9**

Pyrenone 606 Spray

Pyrenone 606, an oil free emulsifiable concentrate containing 60% piperonyl butoxide and 6% pyrethrum has been announced by Niagara Chemical. The spray is being recommended for a wide range of uses and is the result of a development to provide an insecticide that was nonpoisonous, noninjurious to man, livestock, and foodstuffs.

When the concentrate is diluted with water it can be used as a liquid grain protectant, a fruit fly spray, or as an industrial and livestock spray. The spray has been accepted by the USDA

as a liquid grain protectant. Grain treated with the material can be used for food processing for humans or fed to livestock. **PE10**

Liquid Fertilizer Pump

A pump designed to operate on tractor power take-off for the application of liquid fertilizers is available from Hypro Engineering, Inc. The pump can also be used for high volume spraying and transfer of liquid fertilizers. Operating from the tractor power take-off, capacity of the pump is 30 gallons per minute, however at maximum recommended speed the pump will deliver 65 g.p.m. Highest suggested pressure limit is 150 pounds per square inch. **PE11**

Portable Stainless Steel Evaporator

A portable, laboratory model turba-film evaporator for pilot plant study of the unit operations of evaporation, single step distillation, deodorization, heating, cooling, or other heat treatment, is now available from Rodney Hunt Machine Co.

The unit is built of stainless steel throughout and is designed to heat up to 700° F. at 250 lb. per sq. inch. Materials can be processed in a single rapid pass, usually with no loss and in less floor space than that required for conventional equipment. **PE12**

Micro-Kjeldahl Digester

A Micro-Kjeldahl digester with individual rheostat controls manufactured by Laboratory Construction Co. Micro-Kjeldahl has an all stainless steel cabinet, plus three lengths of highly compressed asbestos lumber that assure excellent heat insulation and resistance to corrosion. Designed for digestions in 30 ml. or 100 ml. flasks, the digester is available in single heat models, also with or without glass manifold **PE13**

