

Expert System for Experimental Design

EXPERtIMENTAL DESIGN is an expert system computer program designed to assist researchers in choosing from among 13 experimental designs. The program ranks the possible designs in order of suitability on the basis of answers given by the user to its questions. EXPERtIMENTAL DESIGN accommodates the user's uncertainty by assigning desirabilities. The desirability functions are then automatically manipulated according to concepts of fuzzy set theory. The program is written in Turbo Pascal for IBM PC/XT/AT computers with 256 kilobytes of memory and DOS 2.10 or higher. Statistical Programs. Circle 609.

Microprocessor-Monitored Photometer

The LPI is a compact precision photometer containing a microprocessor. The microprocessor stores data and performs calculations. It contains a self-check system that will indicate whether an operational error has occurred and, if so, the source of the error. Prompts guide the user through the operation of the instrument. The dual light-emitting diode display shows the assay results and stored calculation factor simultaneously. The keyboard includes keys to auto-zero, calculate factor, store factor, and display results. The LPI system comes with a 37°C incubator, two dual-range, positive displacement pipettors, and three interchangeable filters. The adjustable cuvette well admits many sizes of round cuvettes and 10-mm square cuvettes. Stanbio Laboratory. Circle 610.

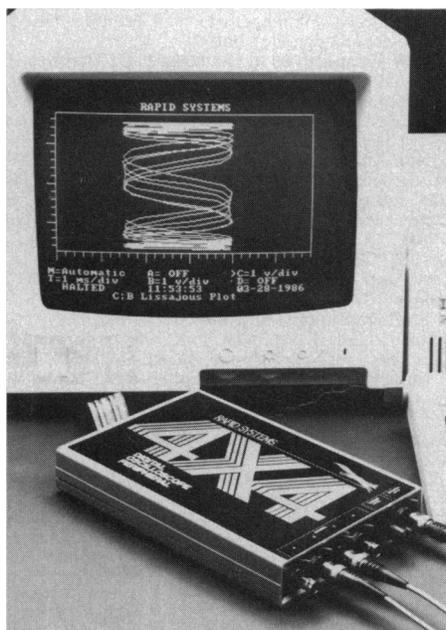
Kit for RNA Synthesis

The RNA transcription kit is designed for synthesis of specific RNA molecules by in vitro transcription. Large amounts of biologically active RNA can be produced for applications such as RNA processing, in

vitro translation, or RNA sequencing. Alternatively, RNA transcripts radiolabeled to high-specific activities may be synthesized for use as probes in blotting experiments. The kit includes the plasmids pTZ18U and pTZ19U, which contain the *lacZ* gene for use in selection of recombinants and which have extremely efficient T7 RNA polymerase promoters located next to polylinker regions that contain a wide variety of cloning sites. The kit comes with all necessary components to perform in vitro transcription reactions, such as T7 RNA polymerase, transcription buffer, dithiothreitol solution, four ribonucleoside triphosphates, and human placental ribonuclease inhibitor. Also included is a control template to test the functioning of the transcription kit. Bio-Rad Laboratories. Circle 614.

Digital Oscilloscope Peripheral

The 4X4 is a digital oscilloscope peripheral for IBM-compatible personal computers. It contains a 128-kilobyte data buffer and can receive and record data simultaneously over four channels. It is particularly suited to measuring and storing events requiring mul-



tipple-channel acquisition, such as material tests, chemical reactions, biological reactions, and dynamic motion tests. The accompanying software is menu-driven. The user can select both pre- and posttrigger sample sizes. Data from any two channels can be plotted in a two-dimensional Cartesian coordinate system, and screen-displayed waveforms can be scrolled, saved, printed, or overlaid. Rapid Systems. Circle 589.

Pyrolytic Analyzers

The PYRAN system comprises two instruments constructed of fused quartz that perform analyses by quartz pyrolysis chromatography. One instrument is a quartz pyrolyzer consisting of a linear temperature programmable pyrolysis chamber followed by standard flame ionization detection. The heating range varies from 0° to 600°C at 1° to 200°C per minute. It yields an organic concentrate in a solid-sample matrix upon calibration with a pure compound. The other instrument is a quartz pyrolysis chromatograph. A variable-temperature, quartz cold trap (-70° to 600°C) condenses the thermal extraction or pyrolysis products before capillary gas chromatography separation (-70° to 350°C), detection, and data storage. The fused quartz creates an inert environment for the pyrolysis process, reducing adsorption and polarity effects while enhancing repeatability. Also, the optical and thermal properties of the quartz make possible precise temperature control by infrared heating and liquid CO₂ cooling. The system's computer provides real-time, closed-loop control of both analyzers simultaneously as well as detector data acquisition and storage. Ruska Laboratories. Circle 611.

Literature

Electro-Optics Products Catalog contains information on a line of instruments for laser diagnostics and spectroscopy. Burleigh Instruments. Circle 593.

Catalog D-2000-1 illustrates and describes oscillographic recorders, magnetic tape systems, imaging and graphic recorders, and test management hardware and software systems. Honeywell. Circle 599.

Immunological Research Catalog features antisera, antibodies, purified proteins, immunocytochemical reagents, and solid-phase immunoabsorbent gels. Jackson ImmunoResearch Laboratories. Circle 600.

Post Column Reaction is a bibliography compiled for chromatographers interested in the high-performance liquid chromatography technique of postcolumn derivation. It is indexed by subject. Kratos Analytical. Circle 601.

728 Autosampler is a four-page brochure describing an automated injection device for high-performance liquid chromatography. Micromeritics. Circle 602.

Science Specialties is a catalog featuring laboratory equipment such as flasks, bottles, stirrers, pH meters, recorders, Teflon fittings and tubing, and stainless steel utility ware. Cole-Parmer Instrument. Circle 619.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

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