**Products & Materials**

**Graphics Workstations for Visual Computing**

The CYBER 910–400 series of graphics workstations process three-dimensional (3-D) real-time graphics. Users can simultaneously rotate, scale, and change the perspective of shaded 3-D solid objects. These workstations operate under the UNIX operating system on a 12.5-MHz reduced instruction set computing processor. They can execute 10,000,000 instructions per second and 9,000,000 double-precision floating point operations per second. They can create 85,000 3-D vectors per second and 5,900 Gouraud-shaded polygons per second. All models come with 8 megabytes of memory, a 19-inch color monitor, and an Ethernet controller; all are equipped with either a 182- or a 380-megabyte hard disk. $19,990 to $34,990. Control Data. Circle 515.

**Liquid Chromatograph**

Model 80–650 is an isocratic high-performance liquid chromatograph for routine applications. All components except the pump are housed in a single cabinet. The sample injection system consists of a six-port rotary valve with a 3000-psi limit. The 254-nm single-wavelength ultraviolet detector has an 8-µl volume and a 10-mm path. Because model 80–650 has a reversed-phase column, a range of polarities and aqueous mobile phases is possible. A single-piston reciprocating pump with a built-in pulse dampener suppresses more than 90% of pump pulsations. GOW-MAC Instrument. Circle 542.

**Gradient Formers**

Four dual-piston acrylic gradient formers are available for electrophoresis, centrifugation, and chromatography applications. The dual-piston assembly disperses fluid in each chamber at the same rate; linear gradients are formed uninfluenced by fluid viscosity and density. Gradients can be poured in less than 2 min. The gradient formers may be operated manually or by a peristaltic pump and are available in sizes of 5, 17, 50, and 200 ml. Julie, Biotechnology Division. Circle 514.

**Premixed Sequencing Gel Solution**

Gel-Mix 8 is a premixed 8% polyacrylamide sequencing gel solution. To prepare a gel, add ammonium persulfate to the bottle, mix the solution, and pour between the glass plates of the sequencing apparatus. Gel-Mix 8 comes in single-application bottles with flip-top nozzles; one bottle yields a 31-cm by 39-cm by 0.04-cm gel. The solution contains 7.6% (w/v) acrylamide, 0.4% (w/v) N,N'-methylenebisacrylamide, 7 M urea, 100 mM trisborate, 1 mM Na3 ethylenediaminetetraacetate, and 3 mM N,N,N',N'-tetramethylthelylenediamine. Bethesda Research Laboratories. Circle 539.

**MSDSs on CD-ROM**

More than 24,000 printable Material Safety Data Sheets (MSDSs) with chemical structures are available on a compact disk (CD-ROM). Updated every three months, the disk is searchable by catalog number, Chemical Abstracts Service (CAS) number, or molecular formula. The disk is compatible with IBM PC or Apple Macintosh computers equipped with a CD-ROM drive and a cable and interface kit. Aldrich Chemical. Circle 543.

**Ray-Tracing Software**

LazerRays is a software program for creating realistic images on IBM PC, XT, AT, or 80386 computers, with or without coprocessors. Scenes can be modeled with accurate reflections, refractions, transparency, sharp shadows, and soft shadows. Objects can be textured with two- and three-dimensional textures of waves, wood, marble, pebbles, snow, fractals, or checkerboards. All objects can be in focus, or the user can define a focal point. Objects can be grouped, as can groups themselves. Objects and groups can be rotated and translated in the three axis directions and scaled. The user can control anti-aliasing and the reflection level. LazerRays operates with EGA, VGA, TARGA, VISTA, and LAZERUS graphics boards. $399 (PC-family version); $699 (80386 version). Lazerus. Circle 517.

**Cell Transfer System**

The microprocessor-controlled Quixell 42 transfers cells between vessels under either sterile or nonsterile conditions. The user, working at a remote console with a joystick, keypad, and liquid-crystal display, positions a nanovolume pipette over the selected cell or cells, which are then drawn into the pipette. The system comprises a phase-contrast microscope, a twin-station x-y motorized stage, and a robot arm to hold the pipette. The pipette is located under the optical axis of the microscope, where the user can always see it. A single keystroke raises the pipette, and the cell is transferred from the petri dish or other source vessel to a well in a microtiter tray. C. Squared. Circle 545.

**Literature**

Model 270 Electrochemical Analysis System is an electronic brochure that simulates on an IBM PC electrochemical experiments such as cyclic voltammetry, square-wave voltammetry, and chronoamperometry. EG&G Princeton Applied Research, Electrochemical Instruments Division. Circle 532.

A Review of Techniques for Electrochemical Analysis is an application note that explains how electrochemistry works, what differentiates it from spectroscopy and other techniques, and what the most common techniques of electrochemistry are. EG&G Princeton Applied Research. Circle 567.

The 732-page CHEMALOG 89/90 catalog lists more than 10,000 biochemicals, organic chemicals, and laboratory reagents. Chemical Dynamics. Circle 568.

Nuclear Supplies & Accessories is a catalog of dose calibrators, positioners, survey meters, syringes, shields, and products for decontamination, personal protection, and photography. Atomic Products. Circle 569.

Surge Protection Applications and Product Guide is a catalog of ac and data line lightning protection devices. MCG Electronics. Circle 570.