

PRODUCTS and MATERIALS

Spectral Interpretation Materials

Mass spectrometry is the subject of a program produced for laboratory technicians, researchers, and students of analytic techniques. The material is authored by Dr. Cathryn Fenselau of Johns Hopkins University School of Medicine. It includes a set of 50 spectra in the form of transparencies for slide projection or for overhead projection, a student workbook which includes reproductions of 40 identified spectra and 10 unknowns and ample space for notation in a vinyl three-ring binder, and samples of substances for analysis (unknowns whose spectra are included among the transparencies). The written material is also available on tape cassette for use at home with the workbook. The mass spectrometry materials parallel materials for interpretation of infrared, Raman, and nuclear magnetic resonance spectra. The programs are well designed for visually oriented courses or for individual study. They cover effects of most of the functional groups encountered in chemical analysis whether it be for physical or biological applications. J. Huley Associates. Circle No. 121 on Readers' Service Card.

Speech Prosthesis

VoiceBak (Fig. 1) is a prosthesis that restores speech to the laryngectomee. The device can be easily installed, worn, and removed for cleaning each day. It does not interfere with eating, drinking, or swallowing and there is no danger of aspiration. Operation is

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 (see pages 866A and 878C) and placing it in the mailbox. Postage is free.—RICHARD G. SOMMER

automatic with no finger control. Air from the lungs is directed through a tracheostoma into a valve that redirects the air through a fistula valve into the esophagus. The air passes over vibratory tissues in the throat and up into the mouth where articulation takes place. VoiceBak weighs only 3 ounces and may be concealed by a scarf and blouse or shirt and tie. Materials used in its manufacture include Cyclocac X-27 ABS plastic, surgical grade latex and Silastic, and sterling silver. The speech produced with the device was judged preferable and more intelligible than that produced by an electric larynx and was judged to be as intelligible and acceptable as speech produced by superior esophageal speakers. Little training is required to master its use. LaBarge, Incorporated. Circle No. 122 on Readers' Service Card.

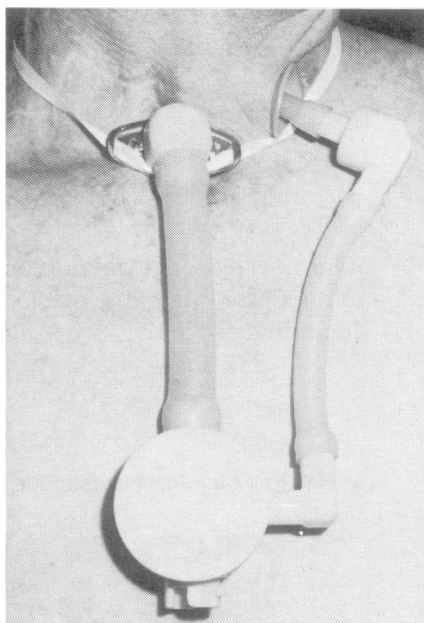


Fig. 1. A laryngectomee with the LaBarge VoiceBak prosthesis in place. The device enables speech with little training in its use and simple care and it is fully automatic but not electric. The device is lightweight and easily worn under a scarf and blouse or shirt and tie.

Glaucoma Diagnosis

The noncontact tonometer measures intraocular pressure without mechanical contact with the eye. This enables the diagnosis of glaucoma with far less discomfort to the patient and without the use of a topical anesthetic. The device utilizes a brief, controlled air pulse and displays the intraocular pressure instantly on a digital readout. The measurement is completed in milliseconds; the patient experiences only a blink reflex. The danger of infection through contamination of contact devices is eliminated. Operator error is minimized and little training is required. Replicate measurements may be made without modification of the intraocular pressure or of the cornea. Solid state circuitry contributes to the accuracy and reliability of the device. American Optical. Circle No. 123 on Readers' Service Card.

Quantitative Cytotoxic Assay

The Cytograf permits rapid assays in which live and dead cells are distinguished by trypan blue exclusion and uptake, respectively. The instrument replaces subjective estimation of viability based upon observation with a microscope. Cells are measured individually at rates up to several thousand per second. The Cytograf is also a cell counter in the conventional sense. Bio/Physics Systems Incorporated. Circle No. 124 on Readers' Service Card.

Graphic Display of Data

Direct digital graphics is a method of presenting data simultaneously in a digital and an analog mode. The basis of the system is a group of characters from 0 to 15 collectively termed Opti-Font (Fig. 2). Each character is clearly readable as a number. Each is weighted differently in the amount of space it occupies and there are four different printing intensities from light gray to full black. The intensities may be used in combination with the 16 Opti-Font characters to give 64 different "characters" or they may be used separately for another parameter. Thus, when data is displayed, there is a readily visible graphic pattern in addition to the specific values represented (Fig. 3). The device that utilizes Opti-Font is the Digicoder. This is a solid state processor/controller that utilizes

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Glaucoma Diagnosis

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