Commercial Announcements

New MacPDF Version 2 Features Expanded Retrieval Capabilities

MacPDF™ Version 2, a Macintosh search/retrieval program for the PDF-2 database, which is based on MacPDF Version 1, expands the capabilities of Version 1 in several important directions. These include implementation of all 19 search options or methods supported by the ICDD, general Boolean search capabilities, expanded display and editing facilities for stick graphs, integration with the Macintosh application environment and operating system through importing and exporting of data to files with standard formats, and the capacity to generate folders or directories of standards which can be used by other power diffraction applications for phase identification.

MacPDF Version 1 is a basic search/retrieval program for the PDF-2 which allows search by PDF Number, mineral name, inorganic chemical name, organic chemical name, and 3 strongest lines. It supports creation of three types of application objects: PDF cards, search objects and stick graphs. Search objects result from searching by the above mentioned methods, PDF cards are used to display PDF-2 pattern datasets, and stick graphs are generated from PDF cards.

In addition to the search methods supported by Version 1, Version 2 supports all the rest of the 19 searches; these can be performed as individual searches (*e.g.*, search by density, principal authors, etc.) or combined into general Boolean searches. Boolean searches can be entered in text format or as lists of criteria. Version 2 also places an emphasis on providing a flexible environment for searching which allows a variety of alternative approaches to the problem of accessing the inherently slow CD-ROM. For example, retrieval of data from the CD-ROM can be batch processed, and there are various ways to customize the searching process to improve performance.

All objects can be saved in files with standard formats. Cards and searches can be saved as text files. Stick graphs can be saved as PICT (or picture) files, and created by importing them from text files. Saving only the list of hk*l*s from PDF cards can be used to generate directories of diffraction pattern standards in text file format which can be used by other programs on the Macintosh for phase identification such as ThetaPlus by Dapple, Inc.

In summary, MacPDF Version 2 has as its central priority the achievement of a fast, flexible and complete search/retrieval environment which is fully integrated with the rest of the Macintosh operating environment and can function with other commercially available Macintosh diffraction applications to handle the entire range of tasks associated with powder diffraction pattern analysis and identification. As of this writing, Version 2 is almost finished; it should be available by the time this issue of *Powder Diffraction* appears.

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Capillary Tubes Available from Charles Supper Company

A full line of thin wall capillary tubes made from quartz, special glass, and borosilicate glass for sampling and instantly sealing liquids, crystals and fine powders is being introduced by Charles Supper Company, Inc. of Natick, Massachusetts.

Supper Capillary Tubes feature a funnel shape at one end and are 89mm long for sampling a wide range of liquids and fine powders. Available in 15 different sizes from 0.1mm to 3.5mm with a 0.01mm wall, they are made from quartz, special glass, and borosilicate glass, depending upon the linear absorption coefficient desired.

Packaged in convenient 25 tube containers, Supper Capillary Tubes are ideal for applications where samples must be instantly resealed, typically using conventional wax methods, and then transported. In addition to wax, the special glass tubes can also be cut and then resealed using an ordinary match flame.

Supper Capillary Tubes are priced according to type, size and quantity. Literature and pricing are available upon request.

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Fritsch Vibrating Cup Mill from Gilson Company

The Fritsch Vibrating Cup Mill, available only through Gilson Company, Inc., provides extremely fast dry or wet grinding of sample materials to analytical fineness.

The P-9 Vibrating Cup Mill includes a built-in 0-3 minute timer. Samples of rock, ore, slags, cast iron, ceramics, clinker and similar samples up to 10mm in size can be reduced to 20 micrometers or finer in 3 minutes or less. The mill prepares samples for spectral analysis with minimal contamination due to short grinding times.

Gilson Company, Inc., is a leader in the design and manufacture of laboratory and field equipment for particle size analysis and sampling as well as environmental and construction materials testing. Headquartered in Worthington, Ohio, Gilson offers over 2,000 different products and complete technical assistance in materials sampling, sample preparation, and testing.

Temperature Controller for X-ray Diffraction Samples

The XR Series Air-Jet™ for temperature control of X-ray Diffraction samples is available from FTS Systems, Inc., in Stone Ridge, NY. The mechanically refrigerated systems deliver a stream of air – controllable between -85°C and +100°C – through a flexible, 8 ft. delivery line to allow visual observation and physical measurement during temperature control. The systems use dry air or nitrogen to prevent condensation on the specimen. A thermocouple in the nozzle connects to a remote digital indicator/controller for constant temperature monitoring.

Also available is a new unit with an ultimate low of -40°C, providing a less expensive alternative to those users who do not require lower temperatures.

Options for both temperature range models include a choice of voltages and computer interfaces.