

Short Courses and Workshops

JCPDS — International Centre for Diffraction Data

Short Course on Search/Match Methods

The JCPDS-International Centre for Diffraction Data will continue to offer three day short courses on Search/Match methods at the Swarthmore, PA, headquarters of the International Centre and elsewhere (see attached schedule).

The courses, which are now in their 5th year, are intended to build proficiency of the user in the interpretation of experimental data, especially in the application of the information provided in the *Powder Diffraction File*. The courses should be useful to the novice as well as the experienced powder diffractionist, and all discussions start with the basic principles leading on to useful laboratory procedures. Workbooks are provided to all attendees and these contain a number of experimentally obtained X-ray diffraction data sets which are used as class exercises. During the workbook sessions, the classes are subdivided to match the needs and experience of the attendees.

The course will emphasize the nature and organization of the information in the *Powder Diffraction File* and retrieval and use of this information for interpreting experimentally collected diffraction data. The implications of the accuracy of measurement of d-spacings, and intensities of experimental data with respect to use of the powder file will be discussed, as well as common instrumentation and specimen-induced errors. The use of both manual and computer search/match methods for phase identification will be practiced through the use of workbooks. Applications of File data for further characterizing phases will be illustrated using several mineralogical problems and a special X-ray diffraction minerals workbook. Other types of materials may be studied including organic and forensic materials, depending upon the needs of the participants.

Course Schedule

First day	
Morning	Optimization of data collection Instrument alignment Sample preparation Evaluation of experimental diffraction data Instrument-induced errors Sample-induced errors

Afternoon Introduction to the *Powder Diffraction File*
Alphabetic search procedures
Hanawalt search procedures

Second day
 Morning Fink search procedures
Classical powder diffraction problems
Phase identification

 Afternoon Phase identification in polyphase samples
Solid-solution analysis
d-Spacing calibration

Third day
 Morning Indexing of powder data
Quantitative analysis
Advanced or topical problems

 Afternoon Computer retrieval of identifications

For further information please contact:

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The cost of a course is \$550.00 which includes textual materials and lunches. Lodging, transportation and other costs are at the expense of the attendee.

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Course Schedules

1987

September 29–October 1
Scintag, Inc.
Santa Clara, CA, U.S.A.

November 10–12
Nicolet, Inc.
Madison, WI, U.S.A.