

X-ray Fluorescence Subcommittee
Wednesday, 12 March, 2008
Conference Room D
3:00 PM – 4:00 PM
G. Havrilla, Chairman

1. The meeting was called to order at 03:05 PM.
2. J. Faber was appointed Minutes Secretary.
3. Roll Call and Attendance sheet was circulated.
4. Mission Statement review was not executed.
 - a. G. Havrilla indicated that recent developments suggested that the Mission Statement did not require change or review at this time.
5. Approval of Minutes from March 2007.
 - a. S. Misture moved that the Minutes be accepted.
 - b. There was no further discussion.
 - c. R. Goehner seconded the motion and a vote taken.
 - d. The vote was 6 yes, 0 no, no abstentions.
6. BoD's Liaison Report was not given since there was nothing to report.
7. Subcommittee Charter Overview and Responsibilities were not discussed.
8. XRF Course offerings by ICDD were not discussed.
9. The Chairman indicated that we would discuss PDF Incorporation of Elemental Composition Data.
 - a. Both G. Havrilla and P. Scardi indicated excitement because SEMs were being equipped a new field emission gun. The new gun offers enhanced resolution for EBSD. The combination of high resolution and EDXRF in SEM, will lead to factors of 10 improvement in subsequent phase ID as well as increasing use of elemental data. As a result, XRF composition data should be added to the PDF to encourage this new market for both structure and elemental information.
 - b. Discussion suggested that GIA investigators should be strongly encouraged to supply elemental information along with the powder X-ray data.
 - c. G. Havrilla suggested that a focus group be formed to incorporate these new developments and associated XRF raw data into the PDF. The aim is a BoD motion that this initiative be approved at the Board level.

A multipart motion was presented and recorded by the Subcommittee Chairman, G. Havrilla.

There was discussion about how to craft this motion for BoD approval.

One complication is that various techniques may sample different volumes. However, with fundamental parameters, the XRF data could be synthesized and compared to raw XRF data.

P. Scardi pointed out that he employs combination XRD/XRF data for alloy analyses and the coupled techniques were very powerful in phase determination, especially in alloy R&D.

Havrilla moved that ICDD develop XRF data in the PDF; that GIA grantees be encouraged to submit XRF data along with XRD digitized data; that we use the FBI RFP as a guide to develop the elemental information for the PDF database, with guidance from Tim Fawcett, to develop a plan by March 2009. Further, that we acquire XRD/XRF data on selected materials and test some of the critical hypotheses discussed here. P. Scardi suggested steels (Fe alloys) should be measured and G. Havrilla committed to carry out the XRF experiments.

The motion was seconded by T. Blanton. D. Taylor expressed strong support for this initiative. The vote was 11 yes, 0 no and no abstentions.

Meeting adjourned.