

X-ray Fluorescence Subcommittee Meeting Minutes

Wednesday, 13 March 2019
International Centre Headquarters
Conference Room D
10:00 a.m. – 11:00 a.m.
Mark Rodriguez, Chairman

1. Call to Order

Chairman, **Mark Rodriguez**, called the meeting to order and the attendance list was distributed for signatures; list is on file at headquarters.

2. Appointment of Minutes Secretary

D. Zulli was appointed as Minutes Secretary.

3. Approval of 2018 Minutes

2018 minutes were reviewed. A motion to approve was made by **Stacy Gates-Rector**. The motion was seconded by **Tim Fawcett**, and a vote was taken. The minutes were approved unanimously.

4. Review of Mission Statement

M. Rodriguez read the mission statement to the committee:

The X-ray Fluorescence Subcommittee will provide recommendations for X-ray Fluorescence to be a complement to both the PDF and ICDD. This entails synergistic interchange between data collected from XRD and XRF:

- Use of chemical identification to support powder diffraction analysis
- Ability to improve chemical composition by use of the powder diffraction data
- To ultimately obtain simulated XRF data as a means of material analysis validation such as refinement of data from multiple analytical methods

In addition, the subcommittee shall develop new educational opportunities for ICDD and offer guidance on addressing elemental composition issues which are of strategic interest to ICDD.

The committee had no changes to the mission statement.

5. Board of Directors' Liaison Report

The BoD report was covered by **Mark Rodriguez** since **Xiaolong Chen** was not present. Mark Rodriguez read the motion that was made to the Board of Director's last year:

2018 Motion:

The Technical Committee recommends to the Board of Directors that headquarters merge the search match method in Sieve on XRD data with the chemical analysis data read into the database via a *.csv file. Report back to the subcommittee in one year concerning the effectiveness of using this multidimensional search procedure. Consider a light element filter for data collected systems that have limited chemical diagnosis (XRF). We desire a multiphase search/match capability for combined XRD/XRF by the release of the 2020 product.

The response from ICDD Engineering Department was that Sieve+ now has the ability to perform an XRF microanalysis search using manually entered or file imported XRF Data. **Justin Blanton** commented that ICDD also implemented a light element filter for the 2019 Database products.

A multiphase search match capability for combined XRD & XRF Analysis has not yet been implemented and will require involvement of members to correctly define program capability.

6. Report on Progress from Tim Fawcett

The next item that was on the agenda, "Discussion regarding possibly implementing compatibility of database microanalysis tool with other vendor search/match programs" was placed there by **Mark Rodriguez** before he received an email from **Tim Fawcett** regarding the work that he had done in the last few months. Mark deferred his agenda topic for a report from Tim Fawcett and asked him to present to the committee the progress that he has made in the past year.

Tim reported to the committee on some of the things that have been tested in the past year. It was noticed during prototyping that not all searches worked perfectly with and without light element cut-off, or if you had low concentrations (concentrations below about .1% of an element). Different detection quantities were explored, using the raw data obtained from the Smithsonian references. A limit was developed and added, which makes the features more user friendly.

The User still has to follow the procedure, and should read the help file and the publication that is out in print, but the Engineering Department implemented warning signs that are very valuable. For example, if the user is mixing oxide formats and metal formats, a very easy mistake to make, a warning sign now appears to alert the user of the error. A “hands-on” demonstration was given to the committee by **Tim Fawcett**.

7. MOTION

After much discussion on the two different modules that were demonstrated to the group in **Tim Fawcett’s** power point presentation, the following motion was made:

The X-ray Fluorescence Subcommittee recommends to the Technical Committee to implement combined XRD-XRF validation analysis in the 2021 product based on the RIR method.

Made: **Mark Rodriguez**

Second: **Tim Fawcett**

Passed: 4 yes; 0 No; 0 Abstain

8. Adjournment

X-ray Fluorescence Subcommittee

Attendance Sheet

Wednesday, 13 March 2019

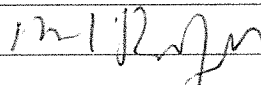
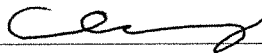
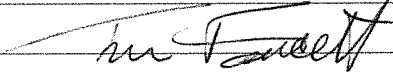
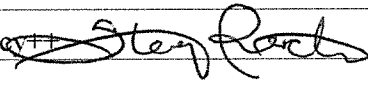
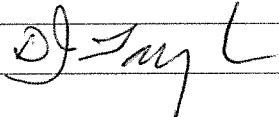
Time: 10:00 - 11:00 a.m.

Conference Room D

Mark Rodriguez, Chairman

Xiaolong Chen, BoD Liaison

Justin Blanton, Staff Liaison

Name of Member	Signature	Name of Member	Signature
Acharya, Bhabani		Martin, John	
Al-Ghamdi, Rasha		Miller, Thomasin	
Ali, Ghulam (SA)		Nicolich, Jeffrey	
Anzelmo, John		Novosel-Radovic, Vjera	
Barpanda, Prabeer		O'Connor, Brian	
Blanton, Tom		Ricou, Pierre	
Bosnic, Vesna++		Rodriguez, Mark	
Chen, Xiaolong		Rosenfeld, David	
Clark, Harlan		Sagnella, Diane++	
DiNunno, Antonio		Sanchez, Hector	
Dodoo-Arhin, David		Scardi, Paolo	
Elam, William		Sein, Sergio Fabian	
Fawcett, Timothy		Shi, Ying	
Gates-Rector, Stacy++		Shinde, Kartik	
Gindhart, Amy++		Taylor, David	
Goebel, Herbert E.		Wallace, Peter	
Hatherley, Lorraine		Zhao, Yanming	
Havrilla, George			
Kabekkodu, Soorya			
Kern, Arnt			
Kinneging, Albertus (Bert)			
Leoni, Matteo			
Maguire, Theresa++			

(SA) Student Affiliate, Non-voting

** Associate Member, Non-voting

++ Staff Consultant - Non-voting

Guests - Please sign on the next page.

