

Wirsam Scientific and Precision Equipment (Pty) Ltd

is pleased to announce a training course in
X-ray Fluorescence Spectrometry
to be held in Richmond, Gauteng

Practical XRF Analysis

An introductory course covering the basic theory of XRF, with a substantial component of practical, hands-on XRF, will be held from the **5 to 9 September 2016**, at Wirsam Scientific, 23 Menton Rd, Richmond, Johannesburg. The workshop and practical sessions will focus on the materials and commodities being analysed at the course participants' laboratories, and sample preparation equipment and Rigaku EDXRF and WDXRF instruments will be made available at Wirsam Scientific.

Lectures and practical sessions will be given by **Emeritus Prof James Willis, Dr Clive Feather, Marius de Jager, George van der Walt and Benjamin Marrian**, on the theory and practice of both wavelength and energy dispersive XRF spectrometry.

Participants will receive a comprehensive set of course materials, including the book "Guidelines for XRF Analysis – Setting up programmes for WDXRF and EDXRF" by Willis, Feather and Turner (2014), together with lecture handouts, notes and other useful documents. Although the course is being held at Wirsam Scientific, the focus and content will be **vendor neutral**, and users of all makes of XRF equipment will find it both informative and useful. Participants completing the course should be in a much stronger position to successfully plan and carry out XRF analysis. A certificate of attendance will be issued to participants who complete the course.

Course Structure

The course is divided into two distinct parts – XRF theory and practical XRF.

The theory section covers: radiation safety; X-ray physics; WDXRF spectrometer components and selection of analytical conditions; XRF sample preparation (primary preparation, pressed powders, fused beads, metals, liquids and special samples); X-ray statistics; mass absorption coefficient theory; XRF calibration theory; EDXRF spectrometers; XRF quality control; an introduction to "standardless" analytical methods; fault finding tools; trouble shooting; XRF maintenance; and XRF laboratory services and environment requirements.

The practical section covers: hands-on sample preparation of pressed powders and fused beads; selecting instrument conditions, qualitative analysis (XRF spectra) and quantitative analysis using WDXRF and EDXRF of samples prepared by participants; calibrations and analysis of "unknowns" for both major elements (using fusion beads) and trace elements (using pressed powders) by WDXRF and EDXRF; a practical demonstration of EDXRF semi-quantitative analysis, the use of drift monitors, correction for background and spectral overlap, and different methods of correction for inter-element matrix effects (absorption and enhancement).

The emphasis will be on the application of WDXRF and EDXRF to geological materials, but applications in the cement, metals and other industries and in environmental analysis will also be discussed. XRF calibration and trouble-shooting workshops are also included.

Attention will be given to the materials and commodities that are being analysed at the course participants' laboratories, high-lighting specific sample preparation requirements, instrument settings and 'tricks-of-the-trade'.

Course participants will be divided into three groups, all of which will do three practical sessions – sample preparation, WDXRF and EDXRF. The course concludes midday on Friday with an open book test and a question and answer session, followed by a lunchtime barbeque.

Fees

The fee for the course will be R13 500, including lunch and teas but excluding accommodation and other meals, payable in full 14 days before the start of the course (before 22nd August 2016).

Cancellations MUST be submitted in writing at least 7 days before the start of the course. Your course fees will be repaid to you minus a 5% administration fee.

Accommodation

Accommodation is available at a number of Guesthouses, B&Bs and the Johannesburg Country Club (JCC), located close to Wirsam Scientific. A special rate will be negotiated with the JCC for course participants. There is a wide choice of restaurants located nearby in Melville.

Registration for the Course

If you would like to attend the course, please send an e-mail message to Jenny Smith or Mariana Wirsam at Wirsam Scientific at email addresses: jenny@wirsam.com or mariana@wirsam.com, giving you name and company details, or complete the attached form, scan and send by email to the above addresses, or fax to +27 (0)11 726 6094.

For further information please call the above ladies at Wirsam on +27 (0)11 482 1060 who can assist in making accommodation reservations.

Registration for the course places you under no obligation to attend, but it does allow us to assess probable attendance at the course. Your registration for the course will be confirmed by email or letter one (1) month before the start of the course, at which time we would expect a final decision from you, and you will be invoiced for the registration fee, **which must be paid 14 days before the course begins.**

Participants from outside South Africa who may require visas should be sure to apply well in advance.

Wirsam Scientific and Precision Equipment (Pty) Ltd

Practical XRF Analysis

To jenny@wirsam.com / mariana@wirsam.com

I am interested in attending the forth-coming Practical XRF Analysis course from 5 to 9 September 2016.

Surname	
First Name	
Company	
Address	
Telephone no Cell phone no.	
Work designation	
What materials do you analyse?	
What model XRFS instrument do you use?	
Date and Signature	

Please complete, and either scan and email to the addresses given above or fax to +27 (0)11 726 6094