Warnings

HIGH INTENSITY X-RAYS

DO NOT EXPOSE ANY PART OF BODY TO THE BEAM

In case of emergency, or if your analyzer is lost, stolen, or damaged, immediately contact Bruker Elemental at (800) 466-5323 or (509) 783-9850 and notify the appropriate regulatory and law enforcement agencies in your state or country.

PRECAUTIONS

Do not allow anyone other than trained and certified personnel to operate the Tracer.

Be aware of the direction that the X-rays travel when the red lamp is on and avoid placing any part of your body (especially the eyes or hands) near the examination area during measurement.

Never hold a sample to the window for analysis by hand; hold the window to the sample.

The infrared (IR) sensor located on the nose is designed to prevent the emission of X-rays in the absence of an object. Do not attempt to defeat this important safety feature as it may result in unnecessary exposure to the operator.

Pregnant women who use the S1 Tracer should be aware that improper handling or improper use of the instrument could result in radiation exposure which may be harmful to a developing fetus.

If required by a regulatory agency, wear an appropriate dosimeter when operating the Tracer.

The operator is responsible for the security of the analyzer. When in use, the device should be in the operator's possession at all times.

Always store the instrument in a secure location when not in use. Do not share passwords with those not qualified to operate the device.









For customer service call (800) 466-5323 or go online at www.handheldxrf.com

Tracer Series Quick Start Guide

Instrument Set Up for Tracer III-SD, Tracer IV-SD, and Tracer III-V[†] (Rhodium X-Ray Tube Target Instruments)

Before You Begin...

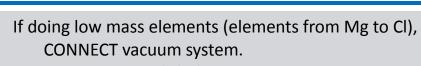
The **Tracer Series are** X-ray generating devices and should only be operated by individuals who have completed an approved radiation safety program. Refer to the *Tracer Series User Guide* for information related to the safe operation of the **Tracer Series Instrument.**



Tracer III-V+ and Tracer III-SD only:

REMOVE brass knurl and **INSERT** desired filter.

Note: The Tracer IV-SD has an automatic filter.



ENSURE gauge reads below 15Torr.

If not, REPLACE Vacuum window (see User Guide for replacement instructions).



CONNECT PDA **or** computer to instrument with serial cable (or USB adaptor if no serial port on computer).

Note: The driver for the serial cable must be installed BEFORE the adapter is connected to the PC.

INSERT battery or **CONNECT** instrument to AC power.



INSERT power key and turn instrument on Note: Yellow light should come on.



PLACE sample in front of vacuum window.

COVER IR safety sensor with large samples or the safety cover shipped with the instrument.

WAIT 1 minute before opening S1 PXRF software on computer.

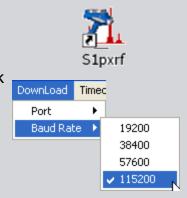


PXRF Software Setup

DOUBLE CLICK on S1PXRF icon on desk top. **OPEN** DOWNLOAD tab.

- ASSURE BAUD RATE is 115200.
- **ASSURE** PORT NUMBER is port you are using. If incorrect, click COM to open box, then type in the correct port number. Generally, this port is COM 1. **DO NOT SELECT USB**.

Note: If using the USB adaptor, open the Windows control panel and then open System and Hardware to determine the port number the computer has assigned.

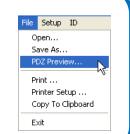


OPEN File tab.

SELECT PDZ Preview.

OPEN a previously stored file so the spectrum is visible on the screen (file must be a Tracer PDZ file).

Note: These steps will set several other communication parameters.



ENSURE dot on the top left of the computer screen is green. If it is red, **CLICK** the red dot to turn it green. This activates the communication between the instrument and the computer

Note: Changing the port number will turn it green.



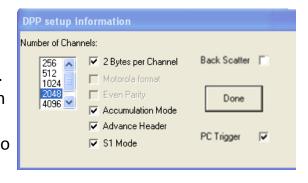
OPEN Setup Tab.

SELECT INSTRUMENT SETUP.

ENSURE PC TRIGGER checkbox is checked.

ENSURE BACKSCATTER checkbox is UNCHECKED.

Note: These settings allow the computer to turn X-rays on in order to take data it, and turn them off when collection is complete. You no longer need to pull the trigger each time you want to collect data.



Note: X-rays will only be emitted when the PC is analyzing or when you are adjusting the tube settings.

OPEN TUBE tab. **SELECT** KTI Tube. **CLICK** Read.



For Tracer IV, **SELECT** the desired filter.

SELECT the desired voltage and current (Active Setting).

Note: Maximum count rates are as follows:

Tracer III-V⁺: 15,000 cts/sec, Tracer III-SD: 200,000 cts/sec Tracer IV-SD: 200,000 cts/sec



Currents must be selected that keep the count rates BELOW the maximum ranges.

OBSERVE Actual High Voltage and Actual Anode current (on right) to ensure they go to selected setting.

Note: The red light on the instrument should be on, indicating X-rays are being generated.



