



better analysis counts

Next Generation of Elemental Analysis Using **Petra MAX Autosampler**

Presented by Joseph Iaia, Product Manager



Presentation Overview

- Petra MAX & HDXRF
- How does Petra work?
- On-screen features
- Data management
- Improved calibration
- Demonstration
- Additional resources



Petra MAX Autosampler

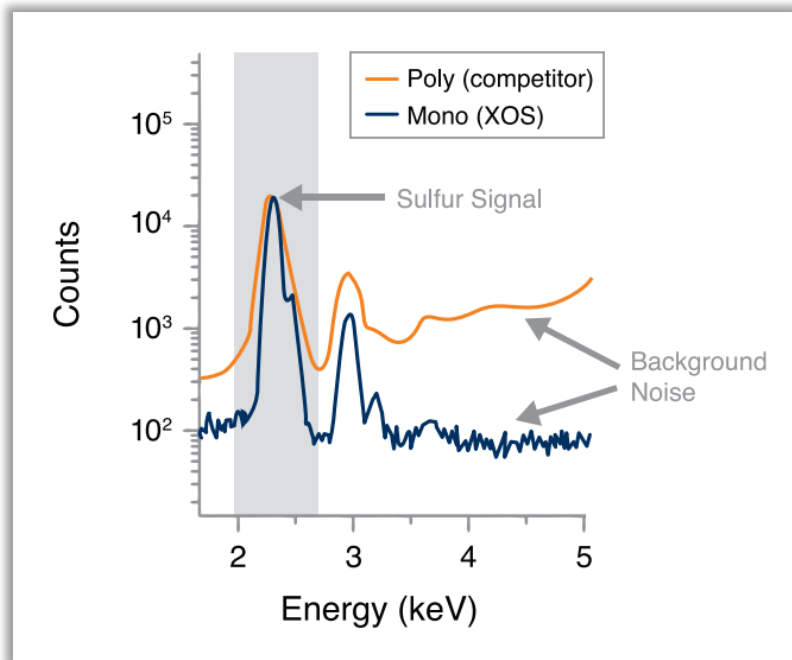


ASTM D4294
ISO 8754
IP 336

- Advanced software features
- 8-position continuous load autosampler with QR-scanning technology

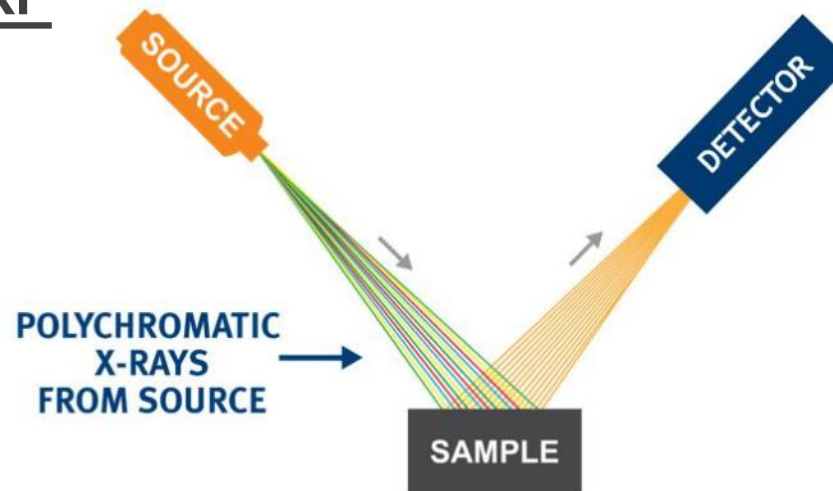
Dynamic Range	Sulfur 5.7 ppm – 10 wt%					
Limit of Detection (ppm @ 600 s)	Sulfur 5.7 ppm					
	P	Cl	K	Ca	V	Cr
	17	3	0.7	0.4	0.1	0.09
	Mn	Fe	Co	Ni	Cu	Zn
	0.07	0.07	0.07	0.04	0.1	0.1
Applications	Hydrocarbons, water, and catalysts					

HDXRF vs EDXRF

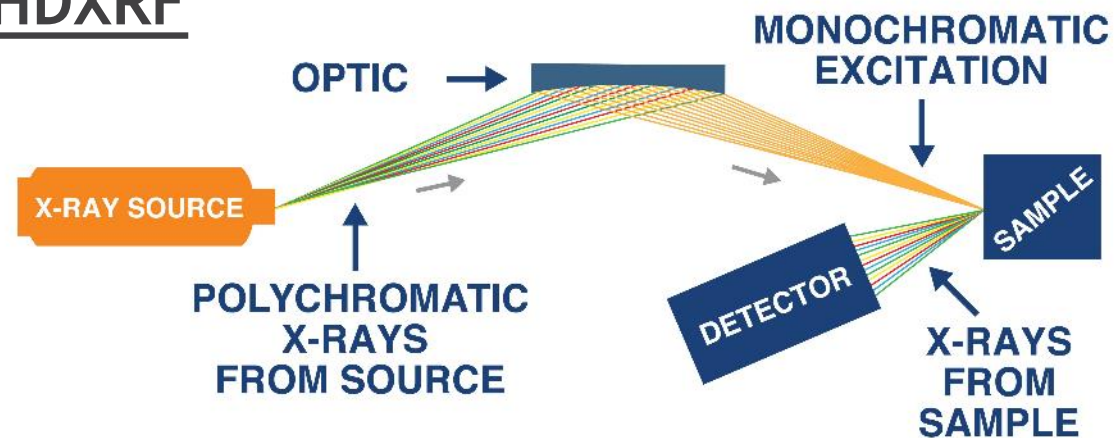


Monochromatic excitation reduces background scatter and increases sensitivity – improving performance over traditional XRF.

EDXRF



HDXRF



Place cup in Petra

How does it work?

300s

1

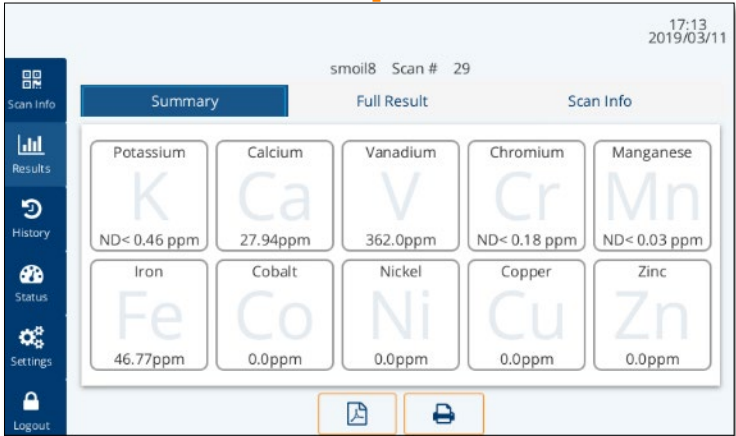


Place sample in cup



2

3



Get fast results

Measurement Modes

QR-Mode

continuously load samples in any order

User: xos 14:42 2018/12/05

Sample Name: sample 1

QR Code: XOS0275000302

Description:

Preset Details

Factory Default

Cal Curve: Default_Hydrocarb on_No_Standard_M method

Scan Time: 30 sec

Matrix: Oil

Repeats: 1

Clear Save

Factory Default ★ QC - Oil QC - water

Non QR-Mode

load 8 samples at one time in correct order

User: xos 14:37 2018/12/05

Sample Name:

Description:

Preset Details

Factory Default

Cal Curve: Default_Hydrocarb on_No_Standard_M method

Scan Time: 30 sec

Matrix: Oil

Repeats: 1

Clear Save

Factory Default ★ QC - Oil QC - water

On-screen Features

average results instantly on-screen

22:44
2019/02/14

Cancel

Select	Scan #	Name	Scan Date	Sulfur (ppm)	QR Error
<input checked="" type="checkbox"/>	13	std_7 3of3	2019-02-14 22:39	16542	
<input checked="" type="checkbox"/>	13	std_7 2of3	2019-02-14 22:38	16416	
<input checked="" type="checkbox"/>	13	std_7 1of3	2019-02-14 22:37	16227	
<input type="checkbox"/>	12	std_6	2019-02-14 22:35	16408	
<input type="checkbox"/>	11	XOS0275000293 3of3	2019-02-14 20:45	85.44	
<input type="checkbox"/>	11	XOS0275000293 2of3	2019-02-14 20:44	ND< 61.29	
<input type="checkbox"/>	11	XOS0275000293 1of3	2019-02-14 20:42	101	
<input type="checkbox"/>	10	XOS0275000293	2019-02-14 20:31	93.21	
<input type="checkbox"/>	9	sample_4	2019-02-14 20:19	48783	

Average

quick configuration sets saved as user favorites

Preset Select Manually

Factory Default ★ QC - Oil QC - water

customize results screen

22:56
2019/02/14

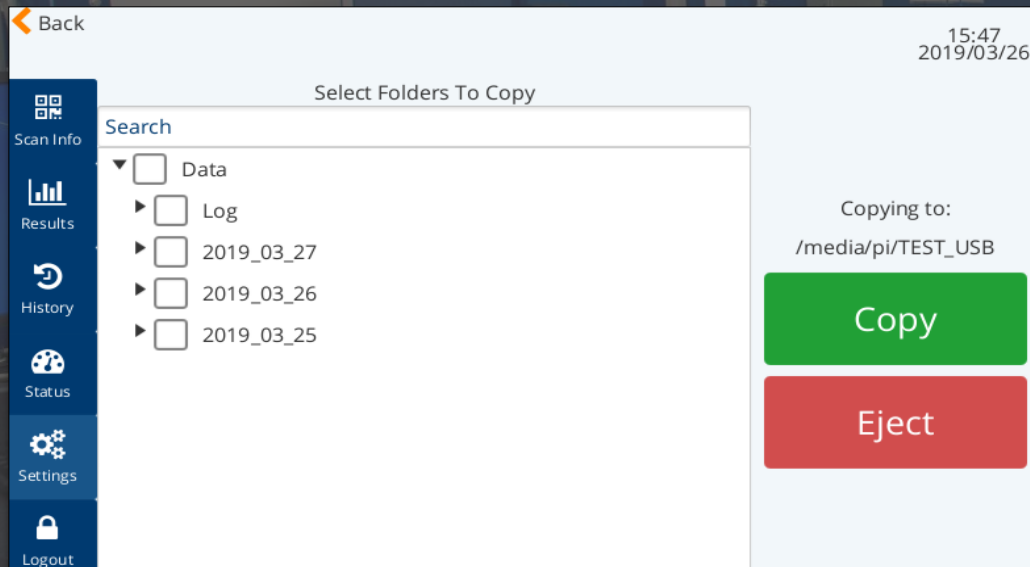
std_7 Scan # 13

Summary Full Result Scan Info

Sample Name: std_7
Cal Curve: Default_FP_No_Standard_Method
Scan Time: 30 sec
Description:
Scan Date: 2019-02-14 22:50
Matrix: Oil

Average of: 2019_02_14/Scan13_22.39_std_7_3of3.hdx
2019_02_14/Scan13_22.37_std_7_1of3.hdx

Data Management



- Auto-populated, LIMS compatible csv files
- Barcode entry for sample bottles
- Indexed, searchable data on-screen
- USB & network printer supported

Petra Demonstration

Let's see how it works.

Additional Resources

- Precision Comparison Between HDXRF vs ICP for Ni, Fe, and V
- S, Ni, V, and Fe Analysis of Crude Oil Using HDXRF
- Get Fast D4294 Sulfur Results without Centrifuging
- Simple Lubricant Additive Package Quality Control Using HDXRF
- HDXRF vs ICP for Ni and V in Crude Oil
- Sulfur in Jet Fuel by ASTM D4294

xos.com/resource-petroleum

THANK YOU

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