



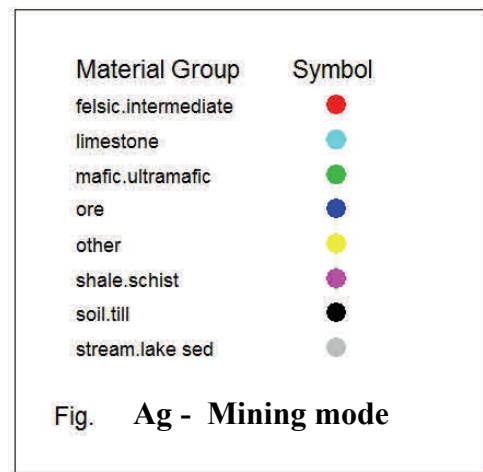
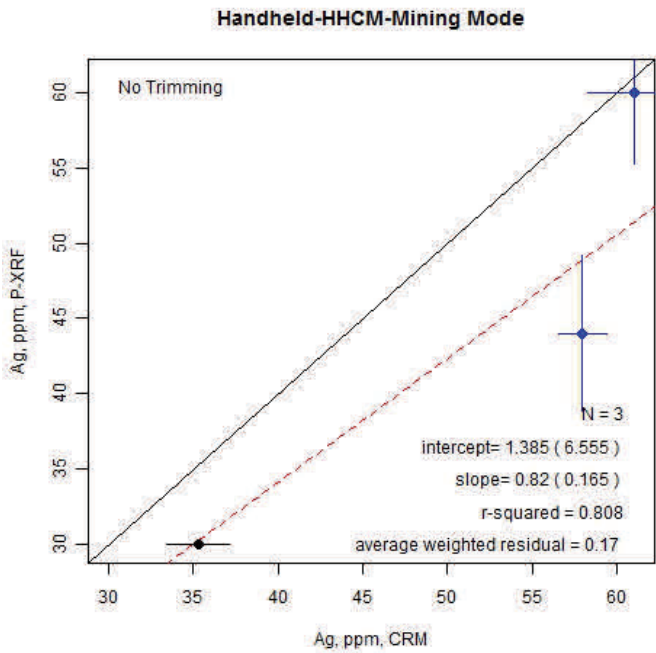
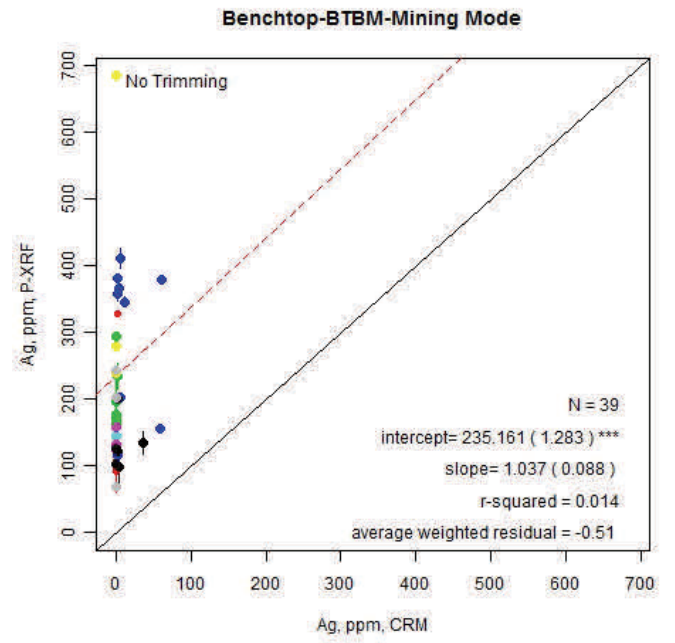
**CANADIAN MINING INDUSTRY RESEARCH
ORGANIZATION (CAMIRO) EXPLORATION DIVISION**

CAMIRO PROJECT 10E01

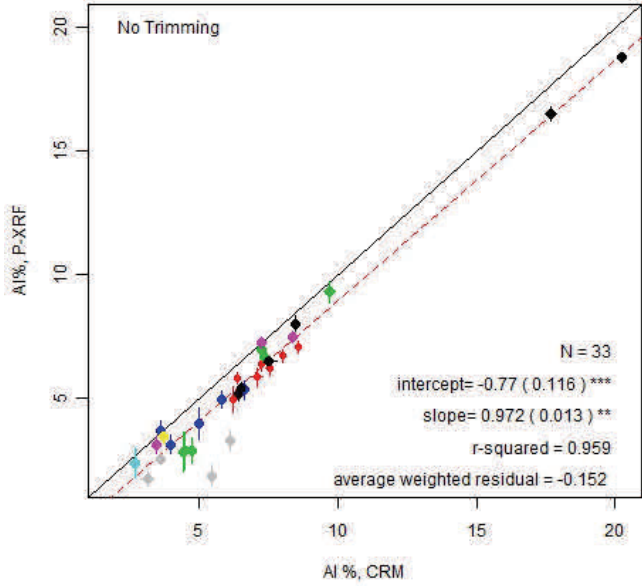
**Quality Control Assessment of Portable XRF Analysers:
Development of Standard Operating Procedures,
Performance on Variable Media and Recommended Uses**

APPENDIX 4b

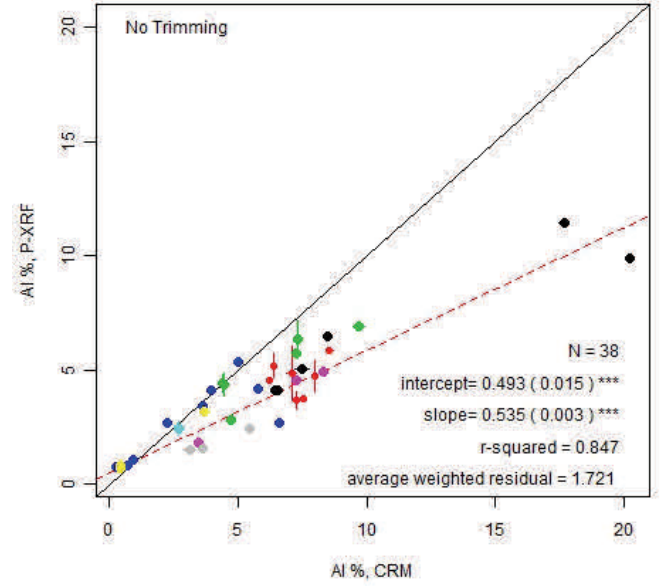
X-Y Graphs for Mining Mode



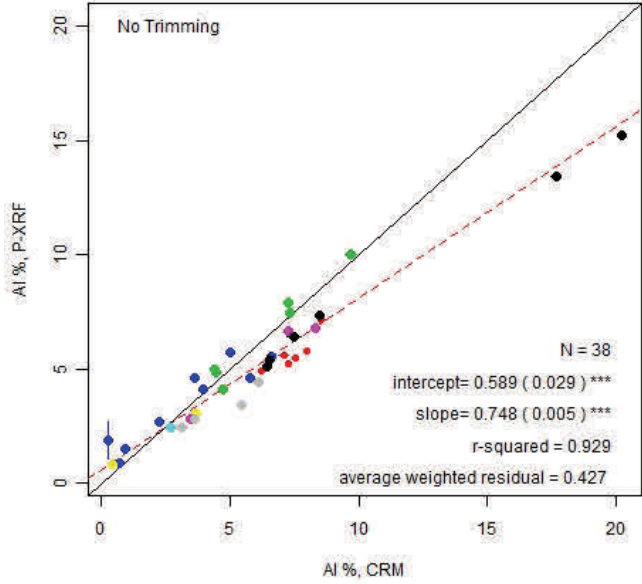
Benchtop-BTAM-Mining Mode



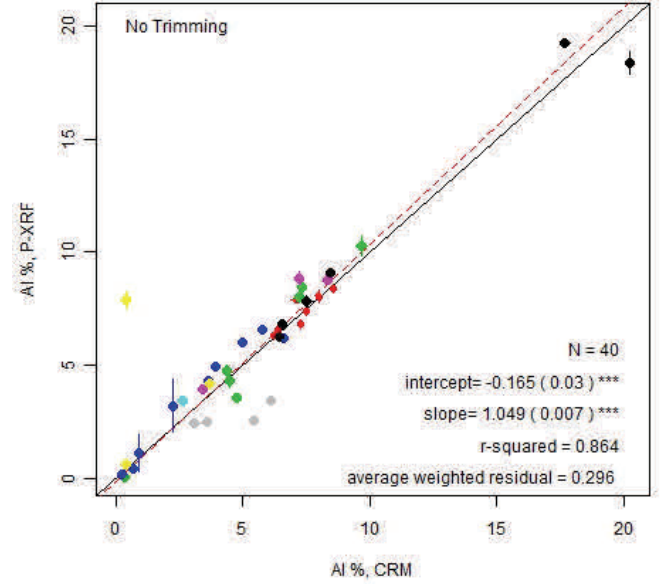
Benchtop-BTBM-Mining Mode



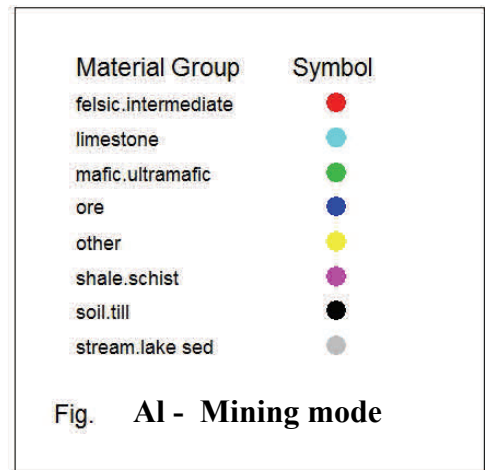
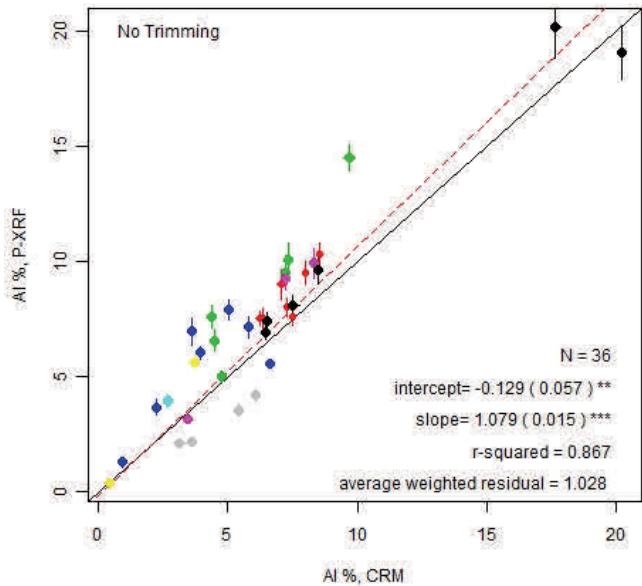
Handheld-Machine A-Mining Mode



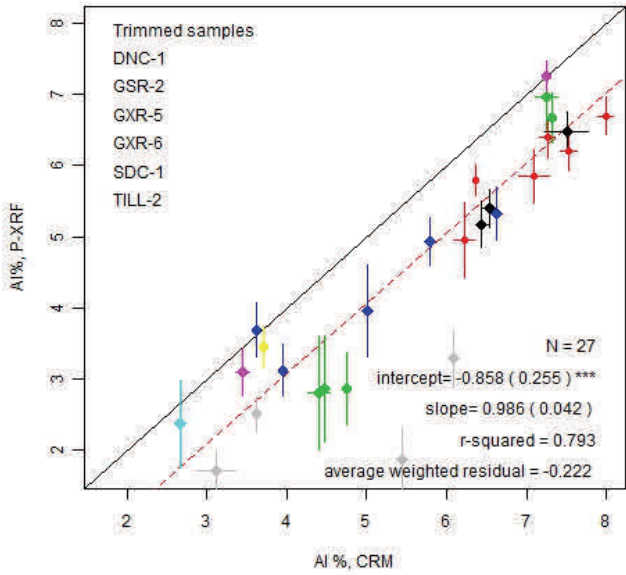
Handheld-HHBM-Mining Mode



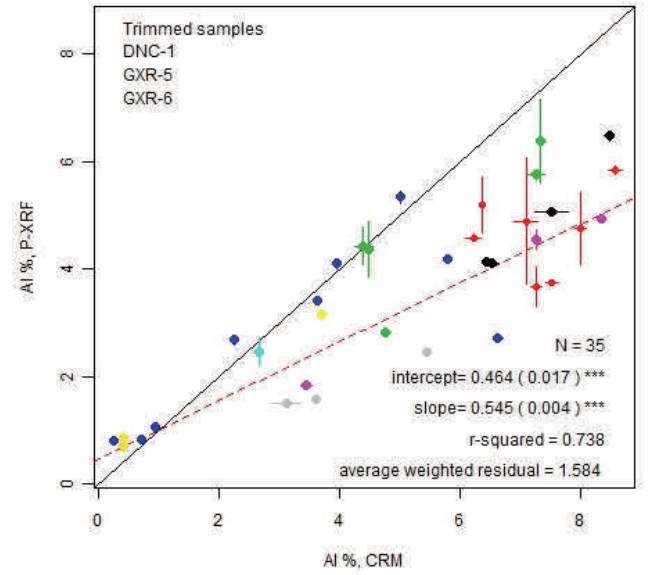
Handheld-HHCM-Mining Mode



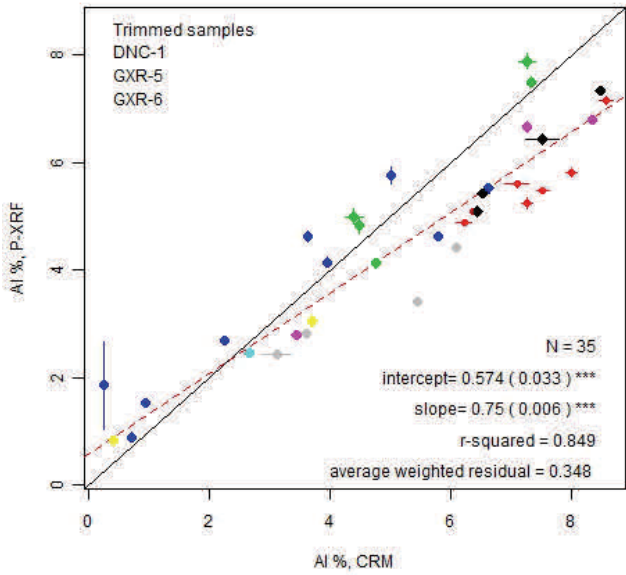
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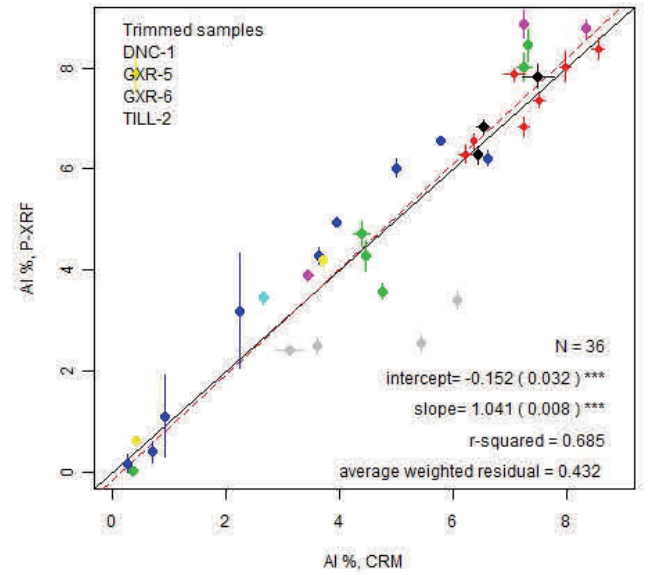
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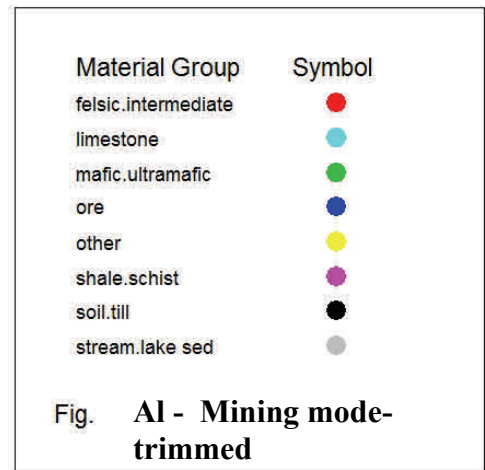
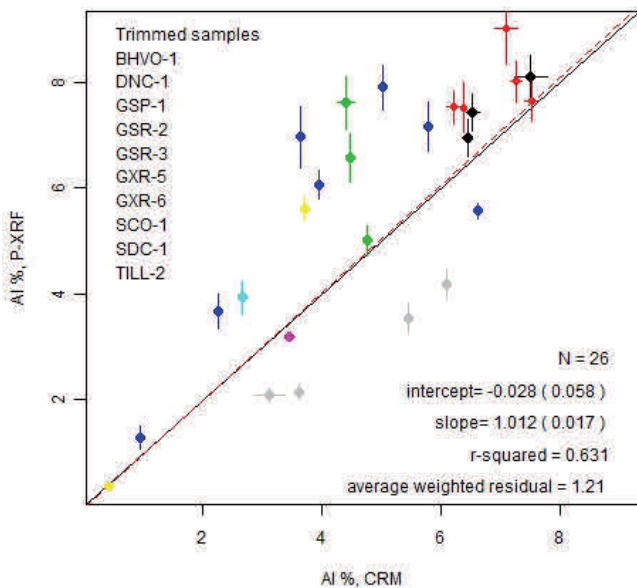
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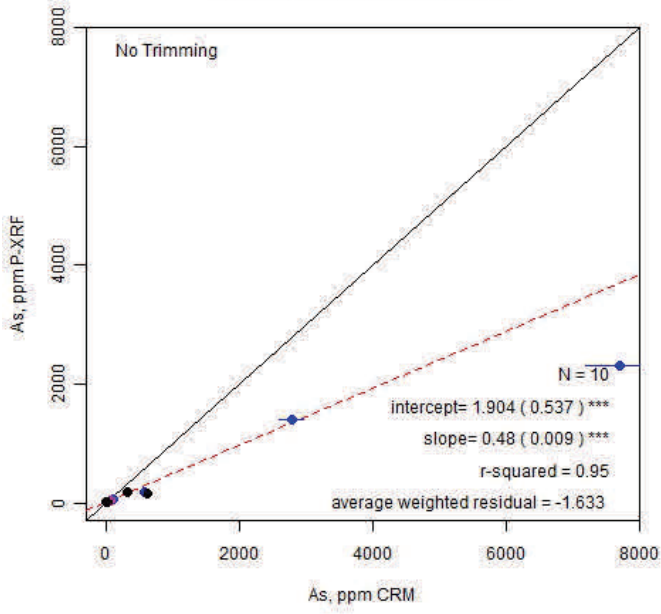
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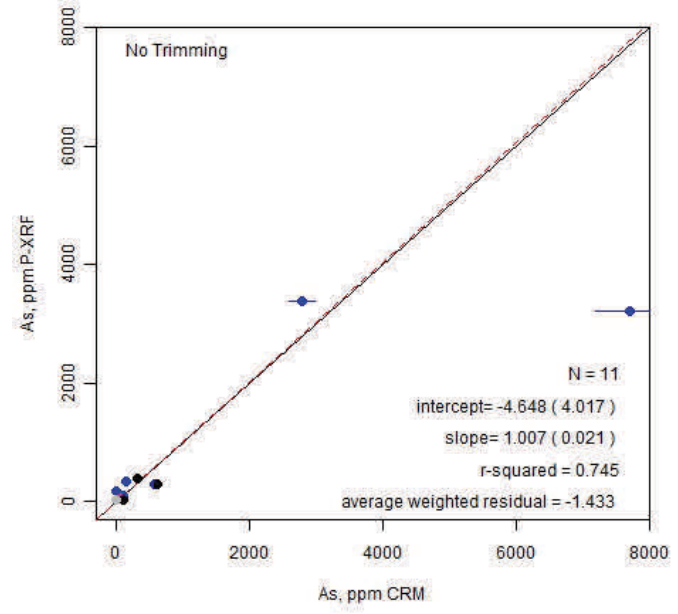
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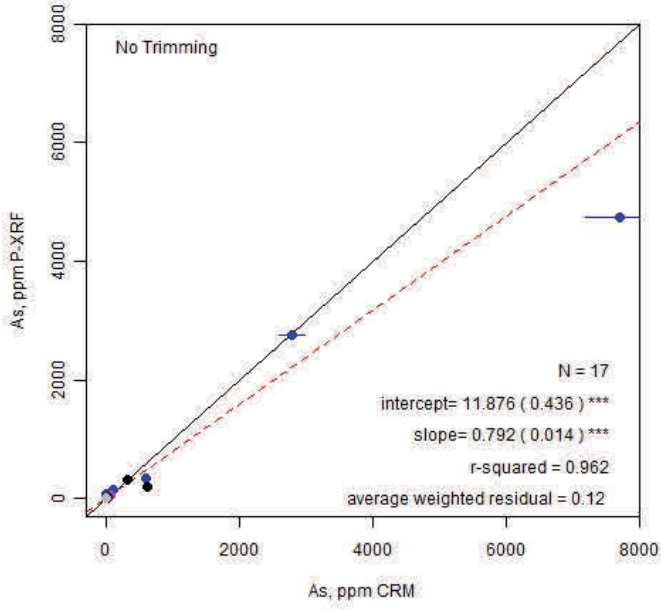
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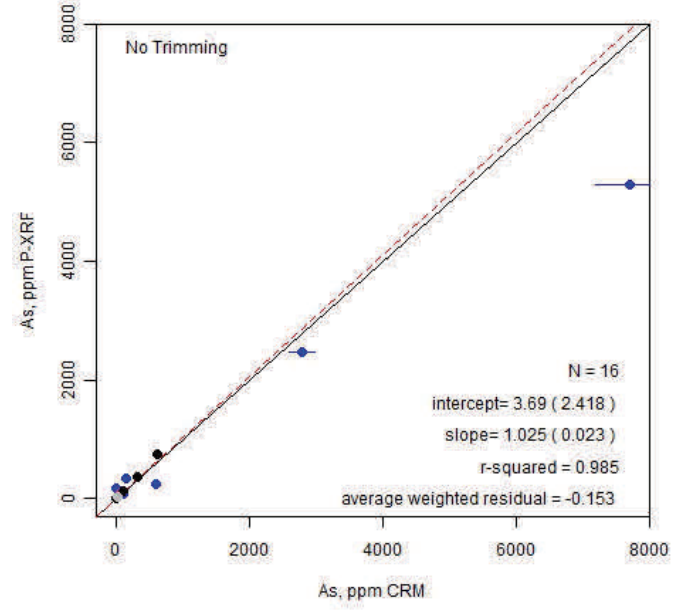
Benchtop-BTBM-Mining Mode



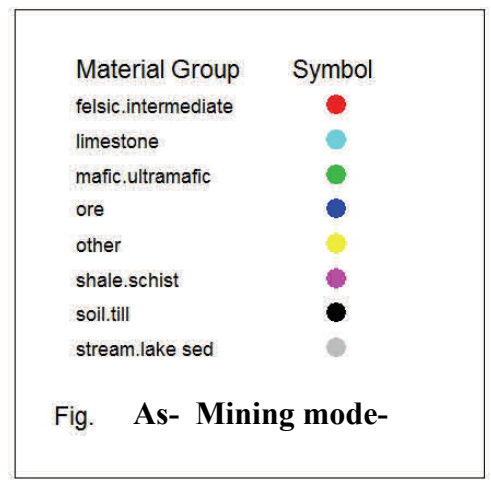
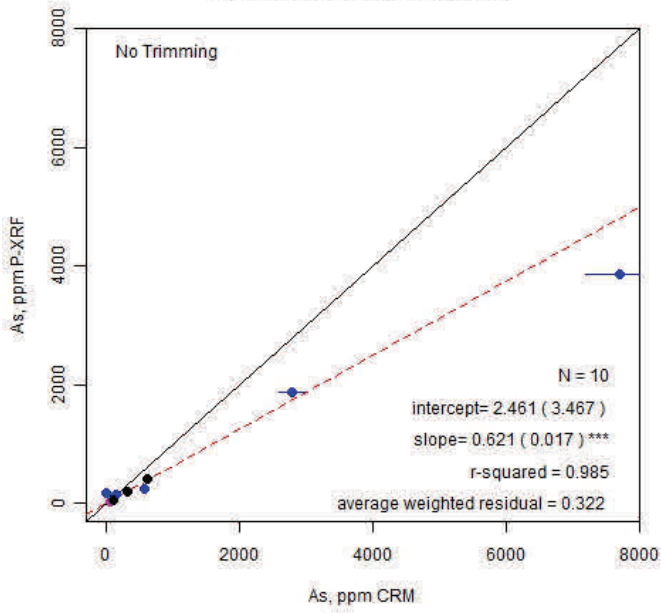
Handheld-HHAM-Mining Mode



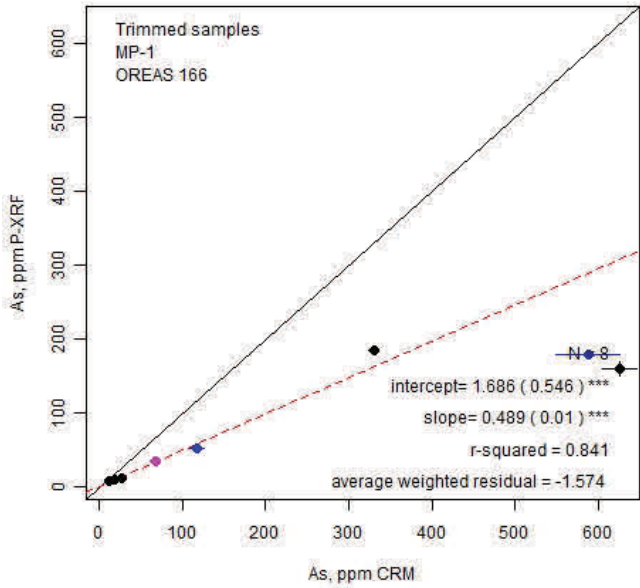
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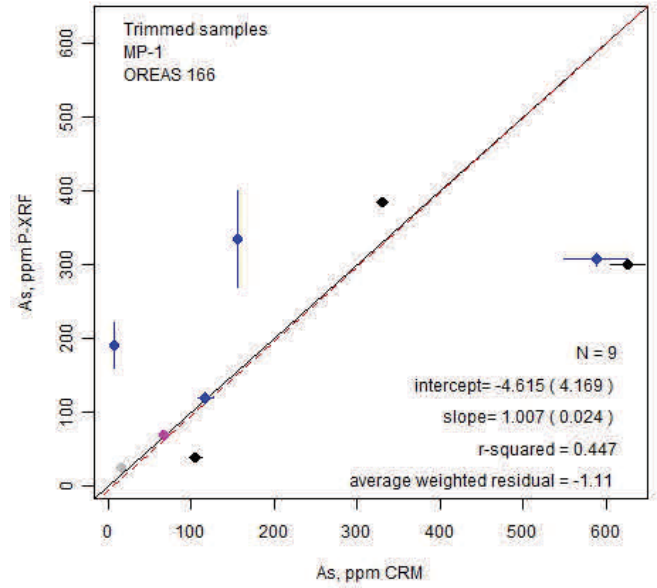
Handheld-HHCM-Mining Mode



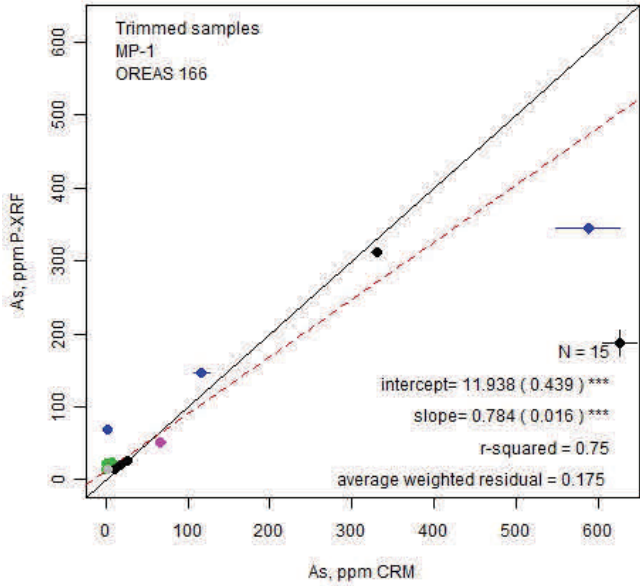
Benchtop-BTAM-Mining Mode



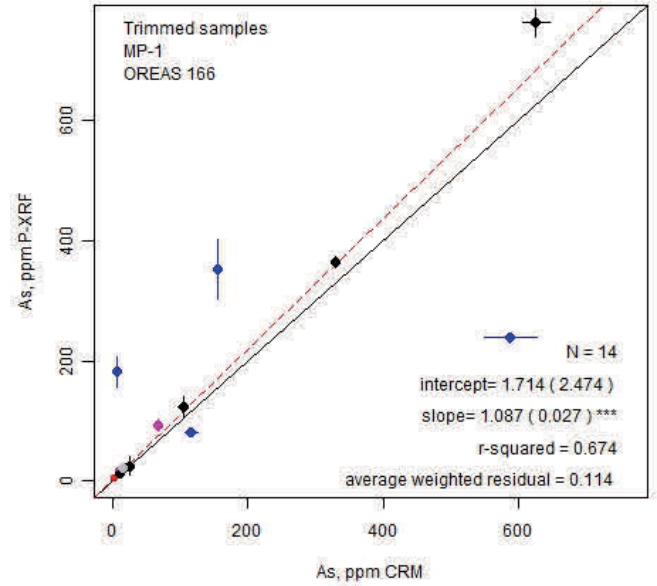
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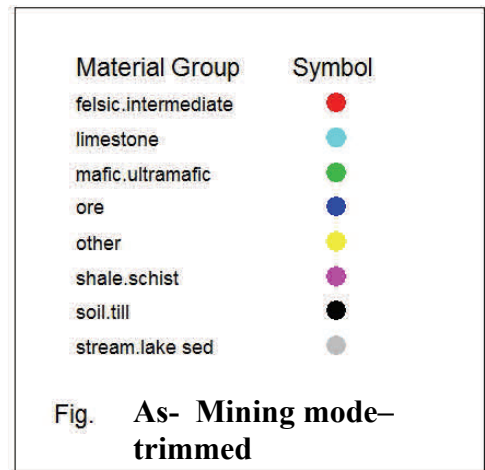
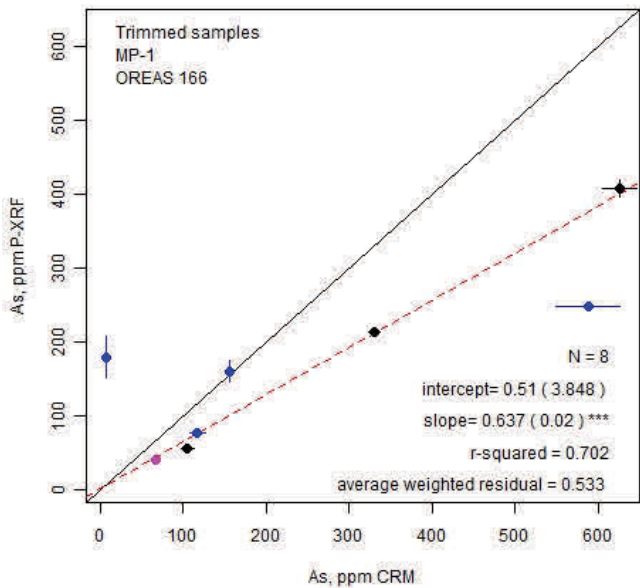
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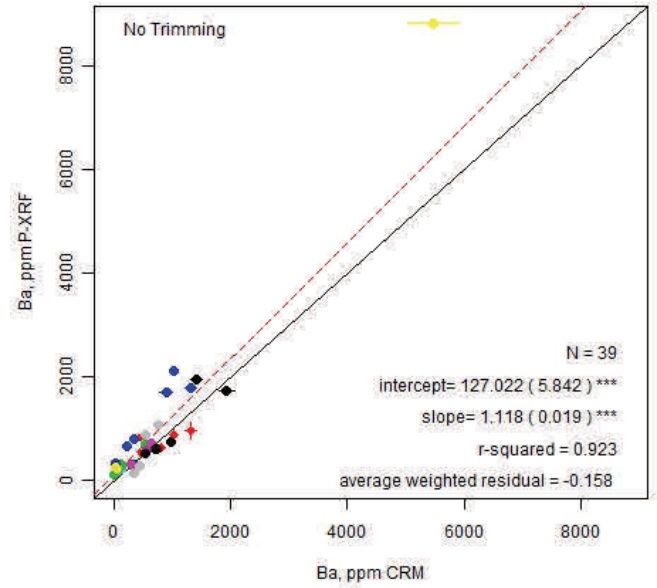
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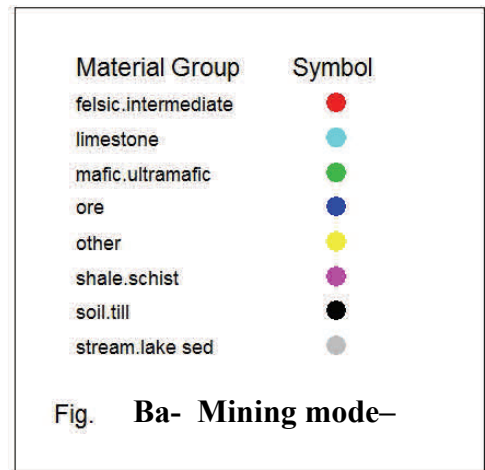
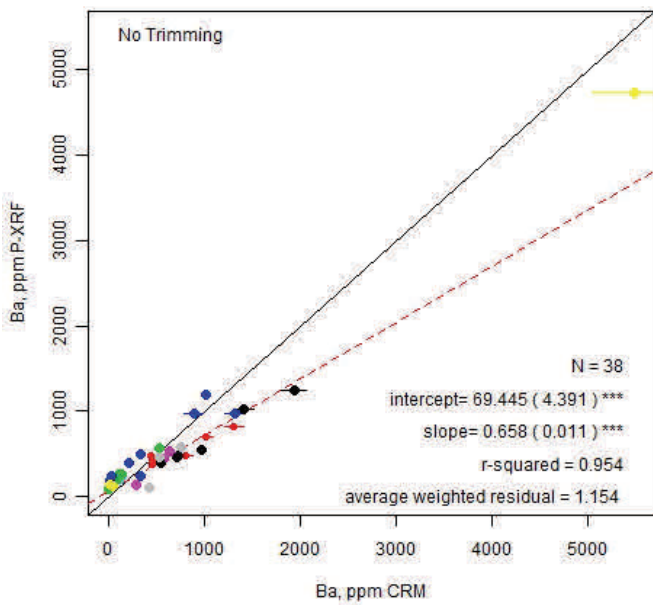
Handheld-HHCM-Mining Mode



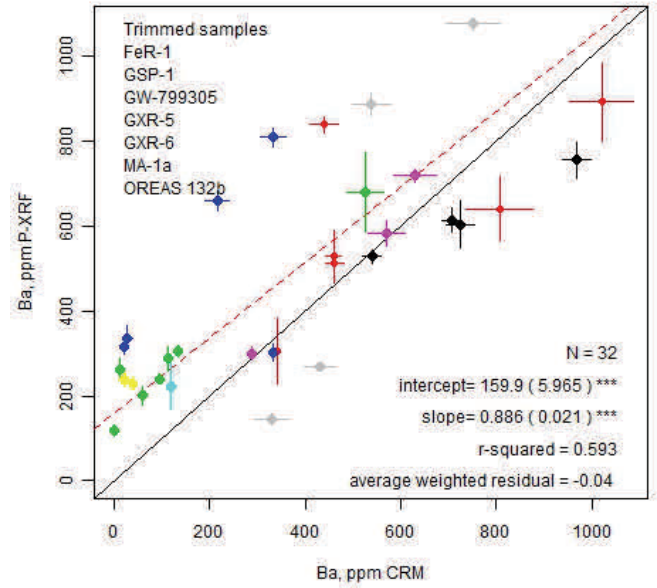
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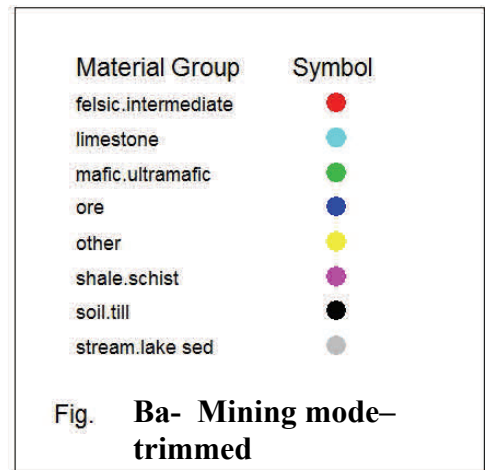
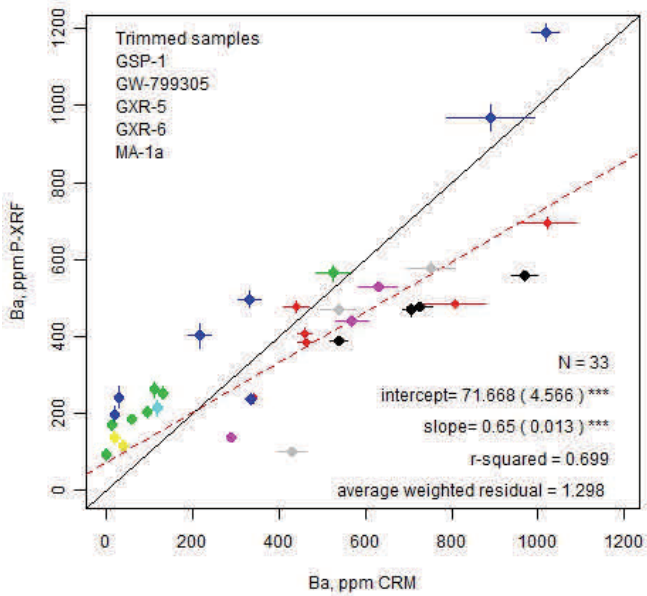
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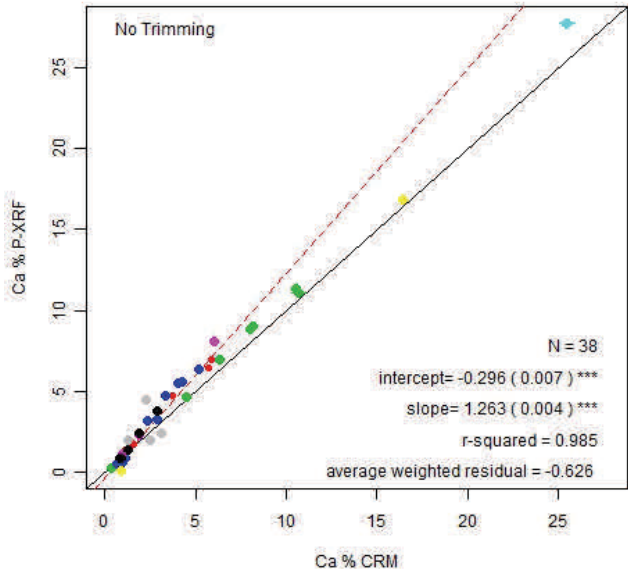
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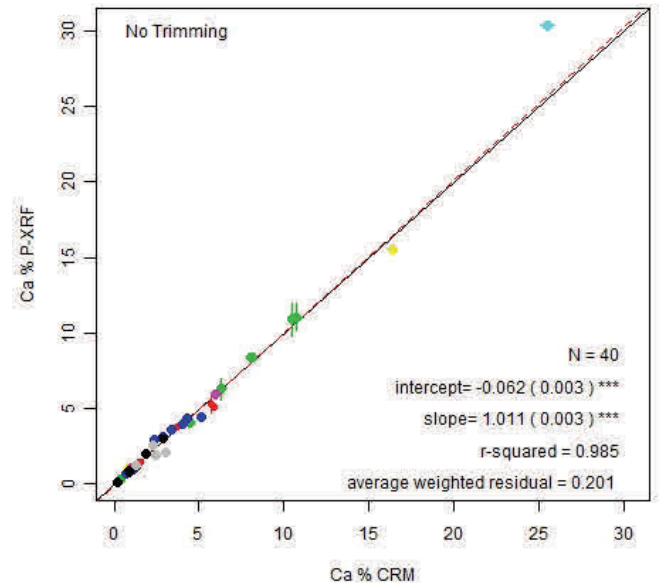
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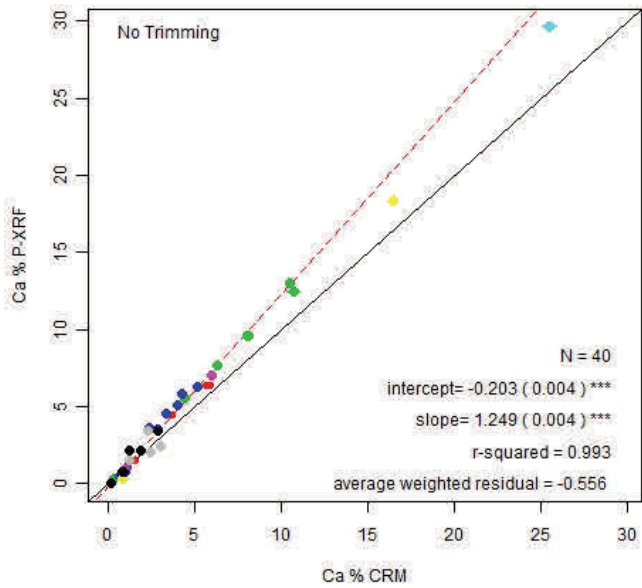
Benchtop-BTAM-Mining Mode



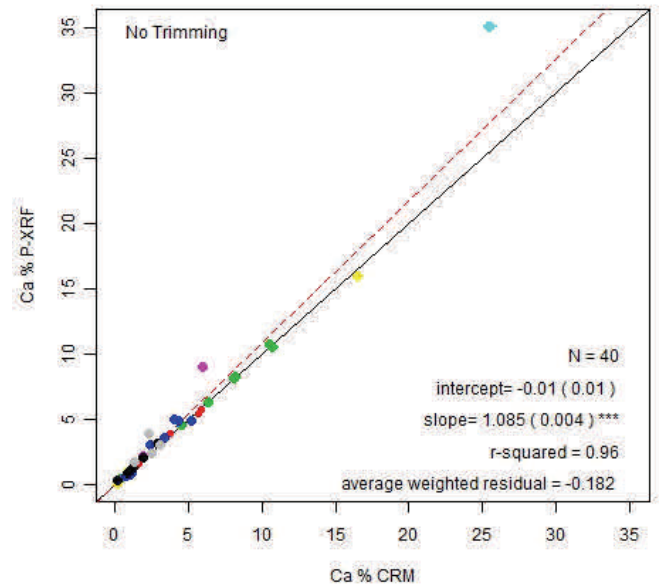
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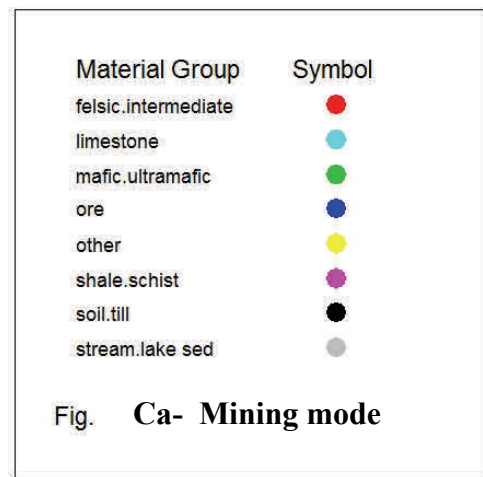
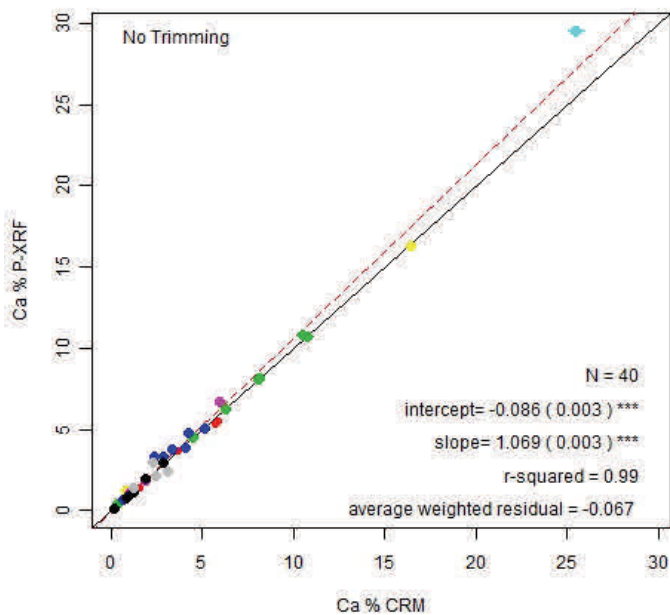
Handheld-Machine A-Mining Mode



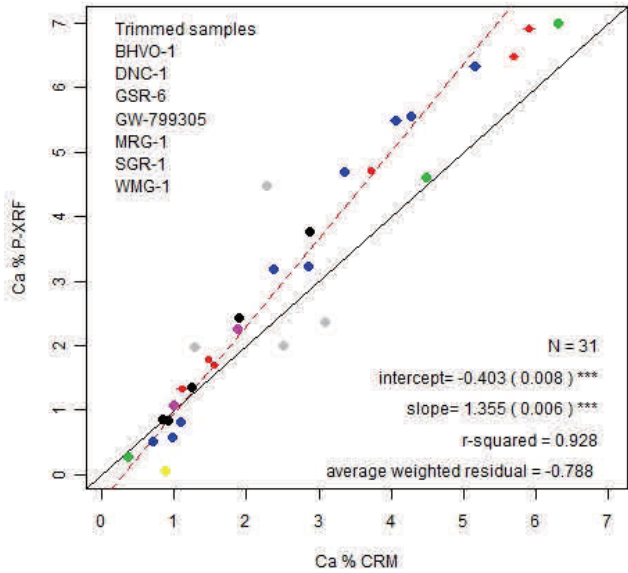
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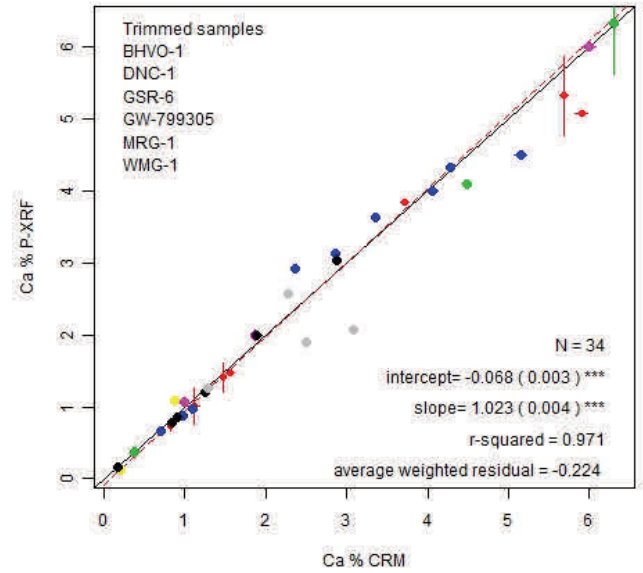
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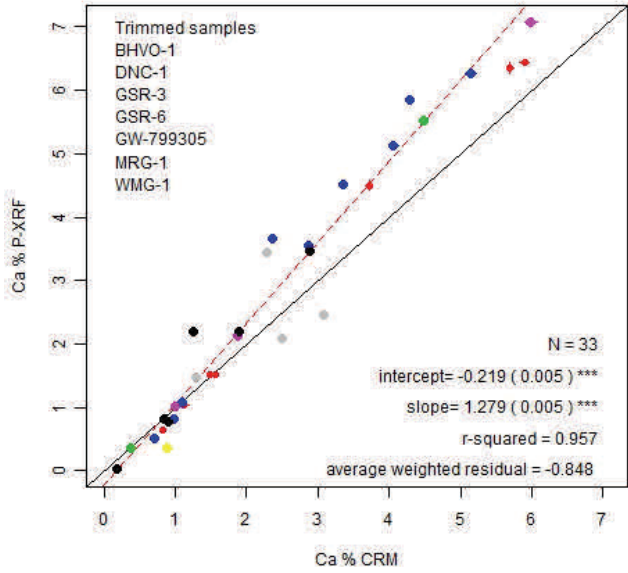
Benchtop-BTAM-Mining Mode



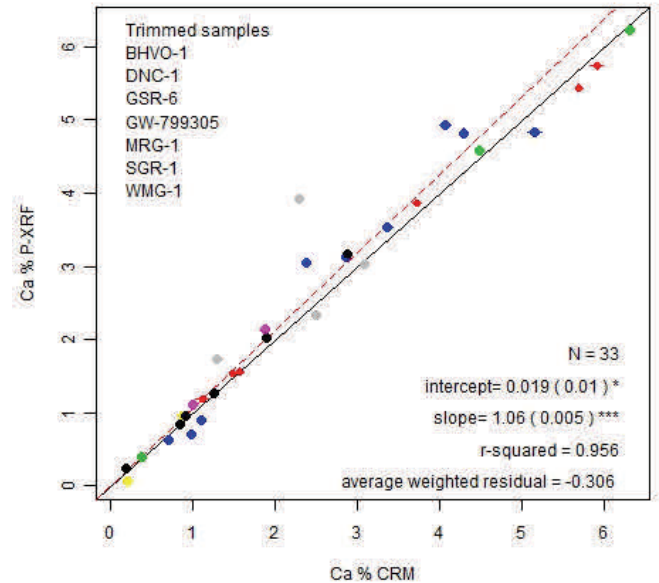
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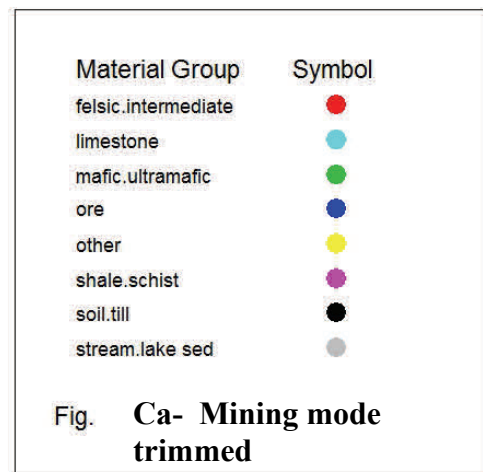
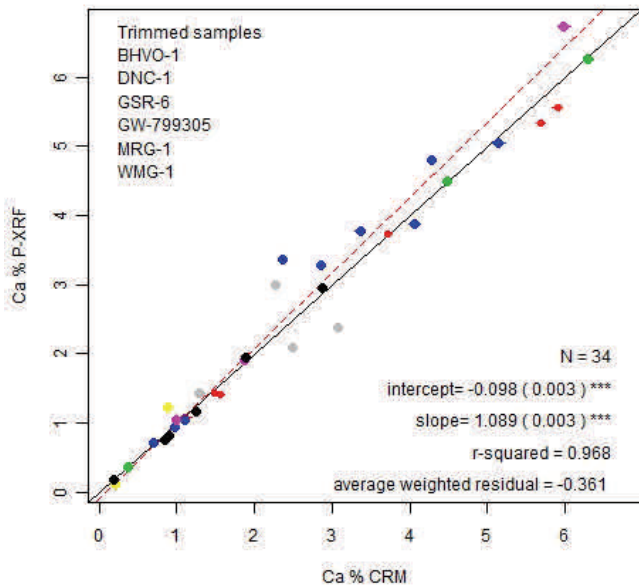
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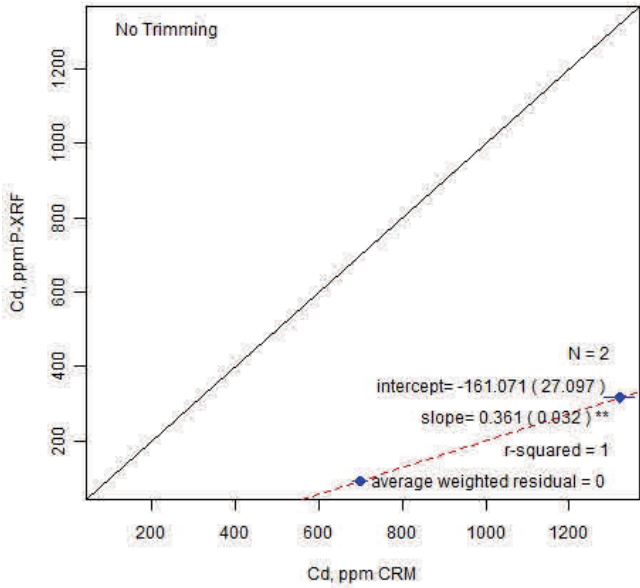
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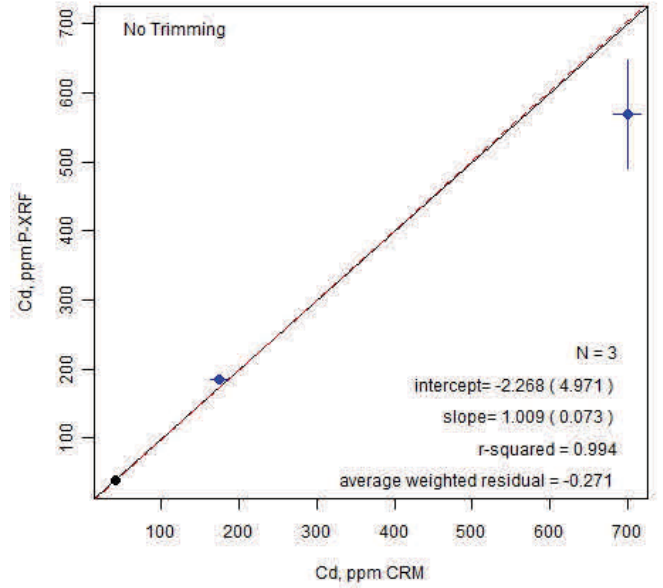
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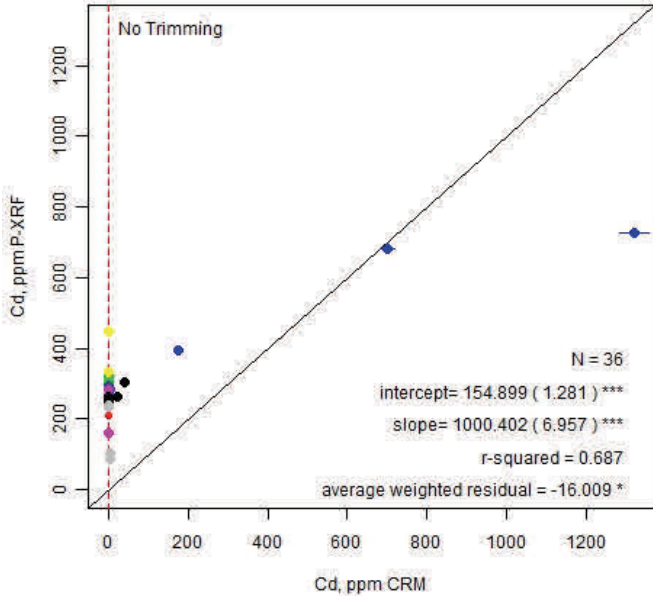
Benchtop-BTAM-Mining Mode



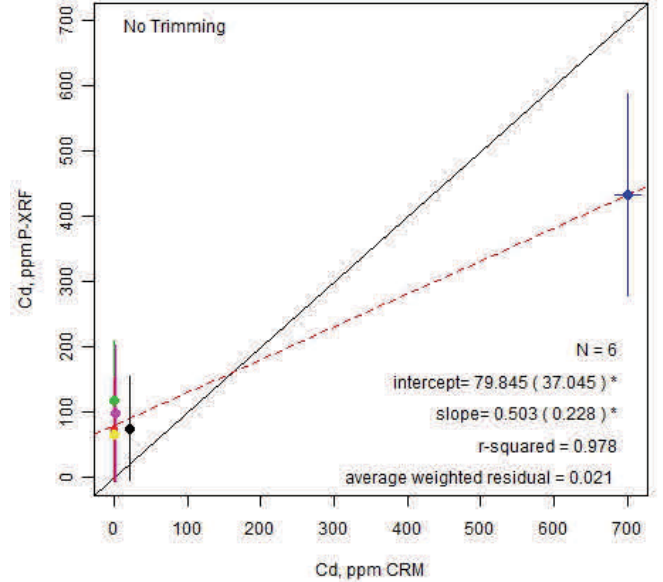
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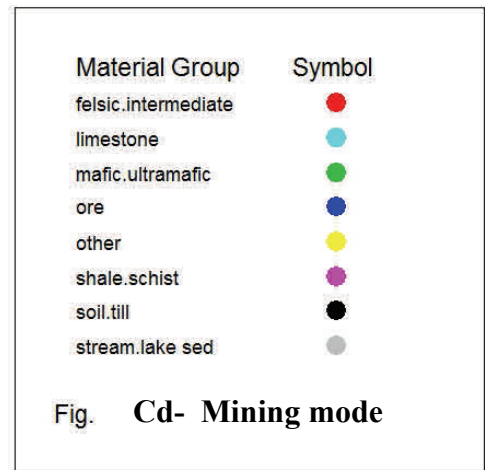
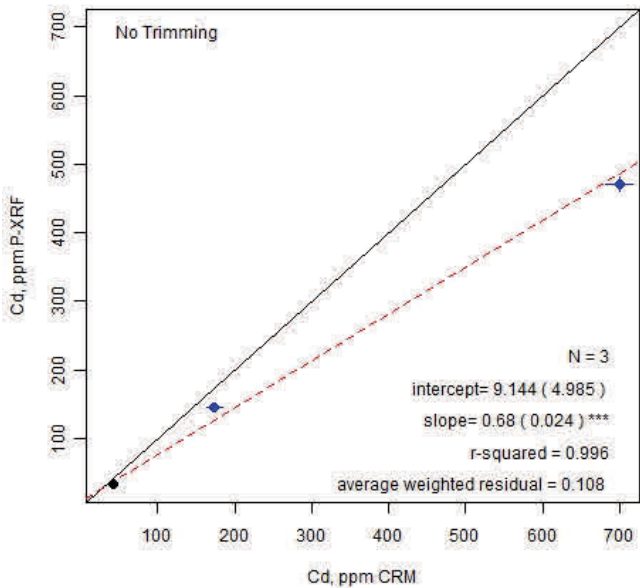
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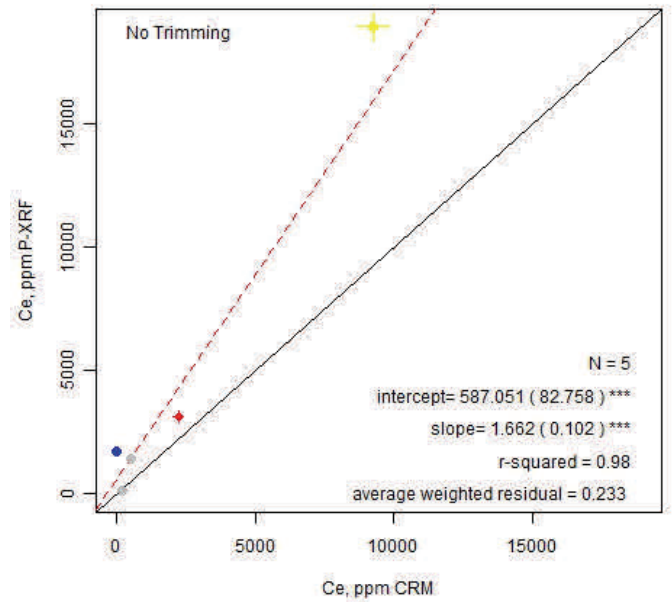
Handheld-HHBM-Mining Mode



Handheld-HHCM-Mining Mode

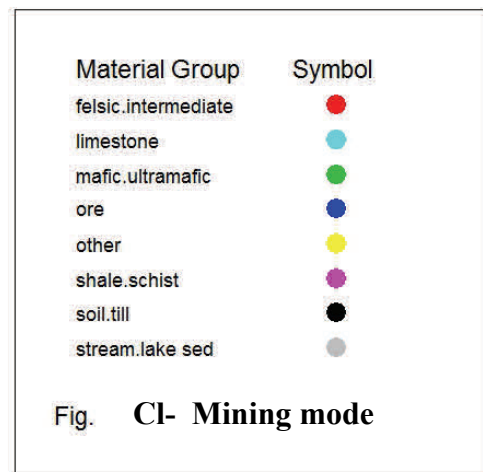
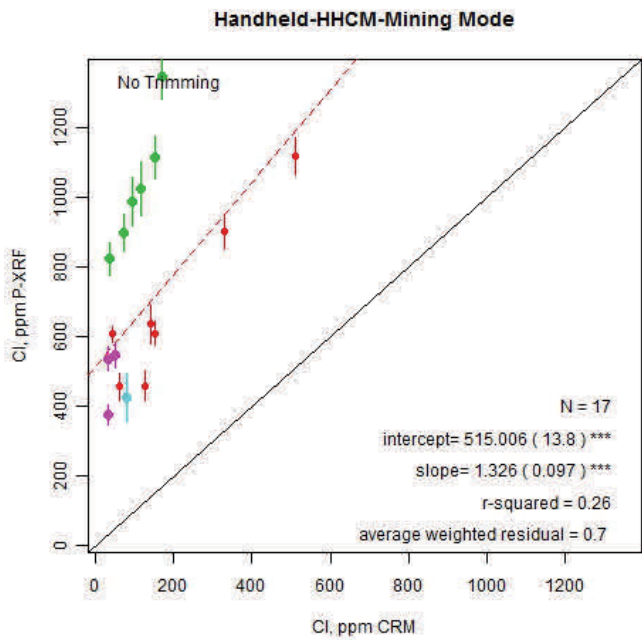
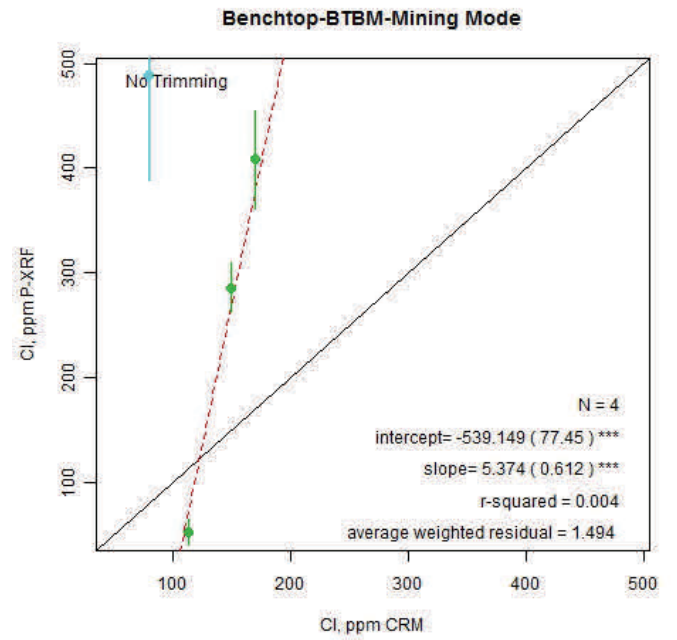


Handheld-HHBM-Mining Mode

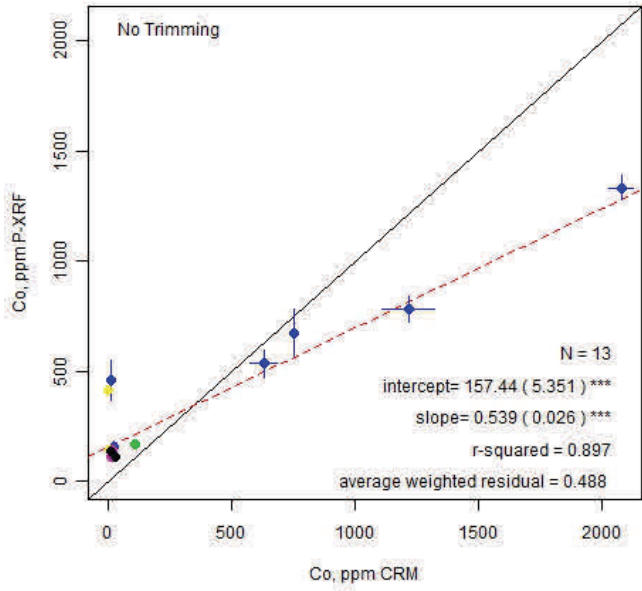


Material Group	Symbol
felsic.intermediate	●
limestone	●
mafic.ultramafic	●
ore	●
other	●
shale.schist	●
soil.till	●
stream.lake sed	●

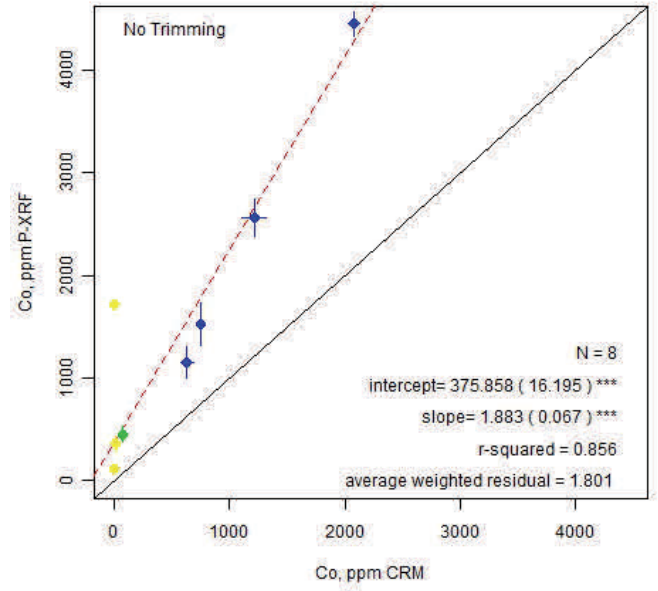
Fig. Ce- Mining mode



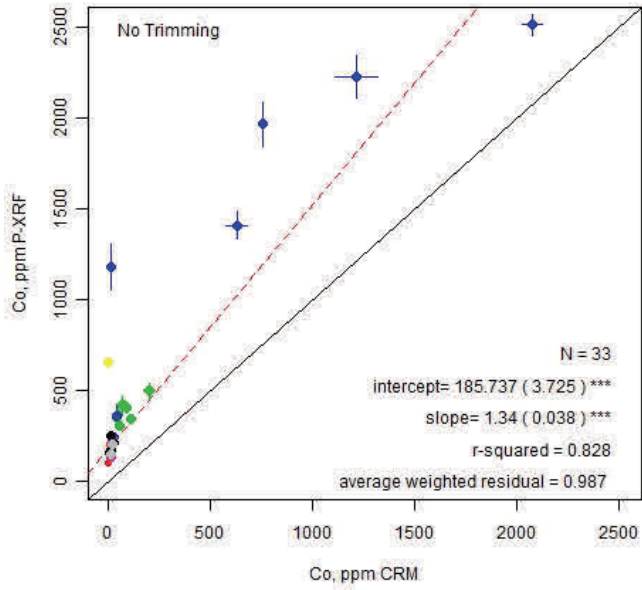
Benchtop-BTAM-Mining Mode



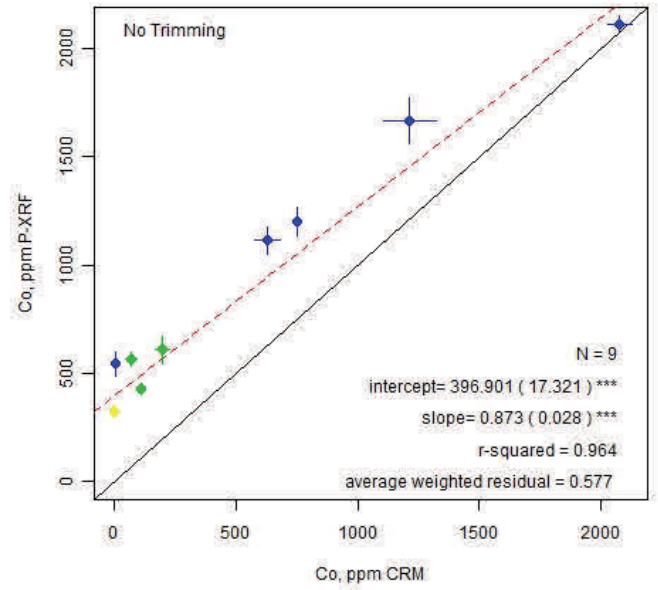
Benchtop-BTBM-Mining Mode



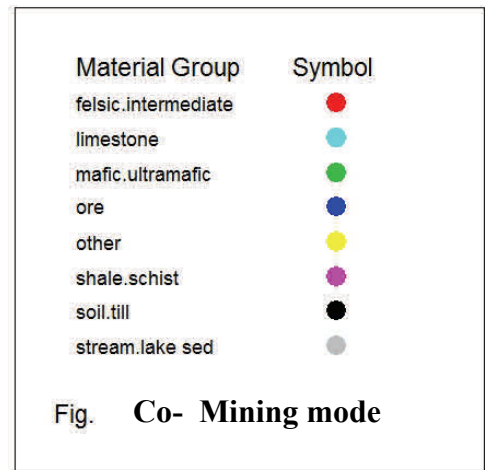
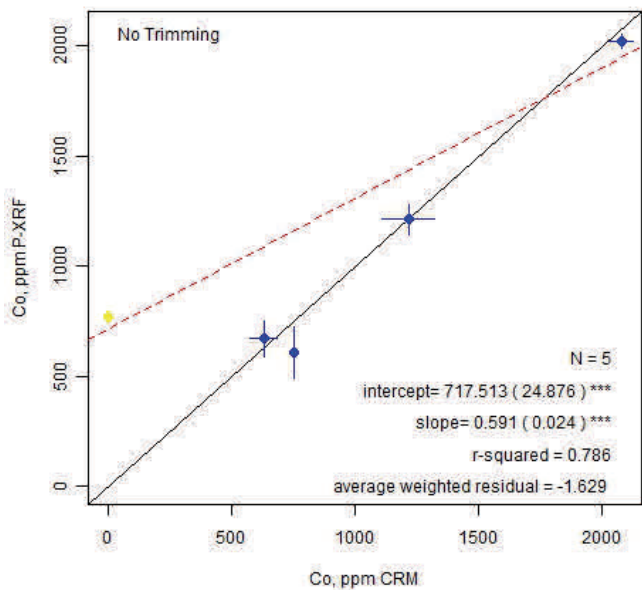
Handheld-HHAM-Mining Mode



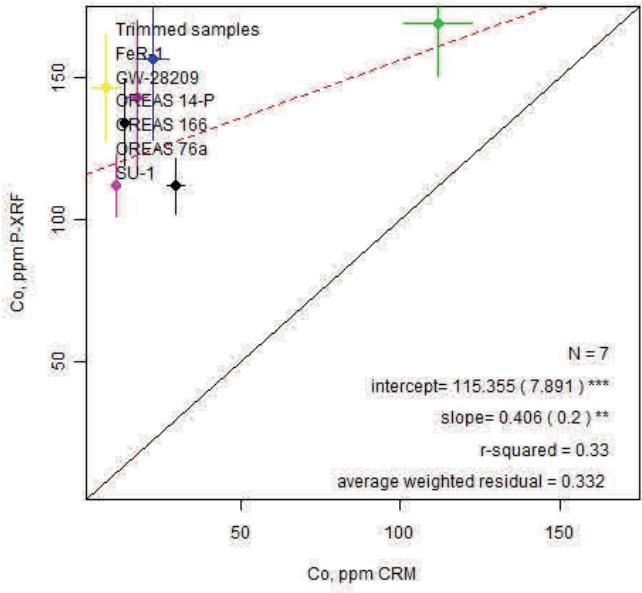
Handheld-HHBM-Mining Mode



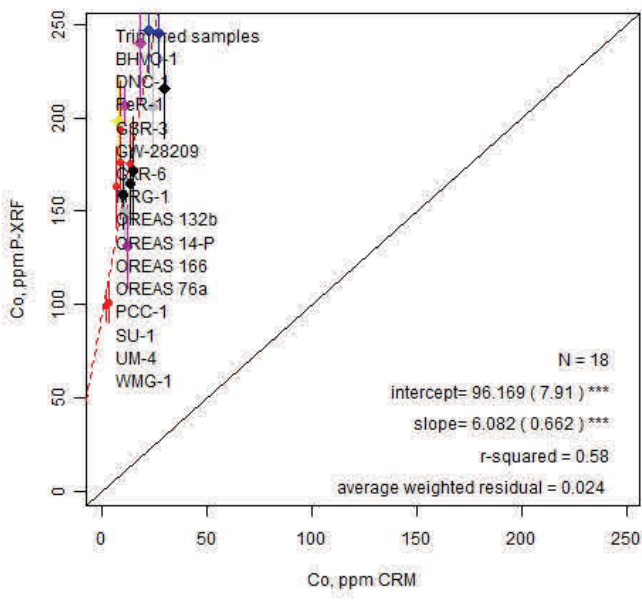
Handheld-HHCM-Mining Mode



Benchtop-BTAM-Mining Mode



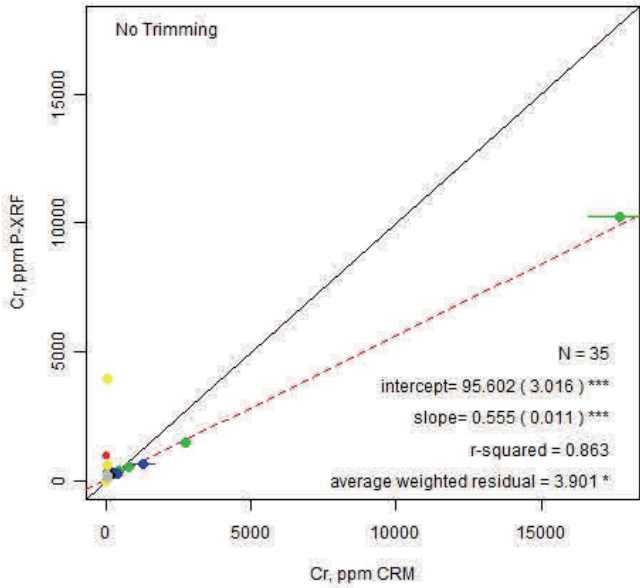
Handheld-HHAM-Mining Mode



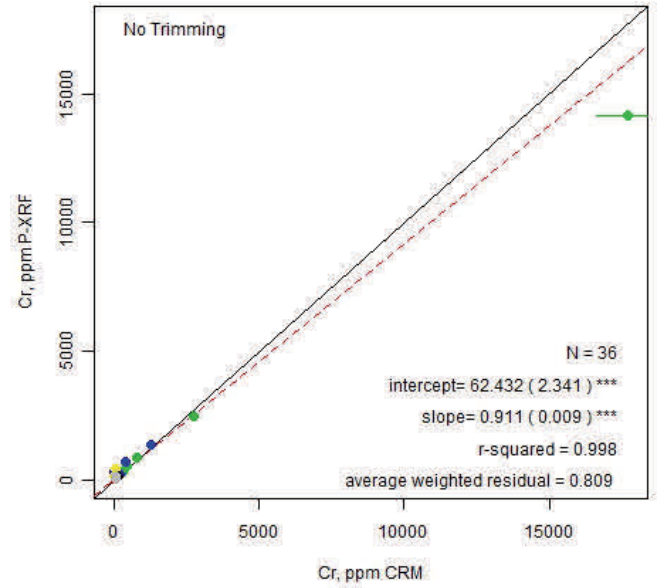
Material Group	Symbol
felsic.intermediate	●
limestone	●
mafic.ultramafic	●
ore	●
other	●
shale.schist	●
soil.till	●
stream.lake sed	●

Fig. Co- Mining mode trimmed

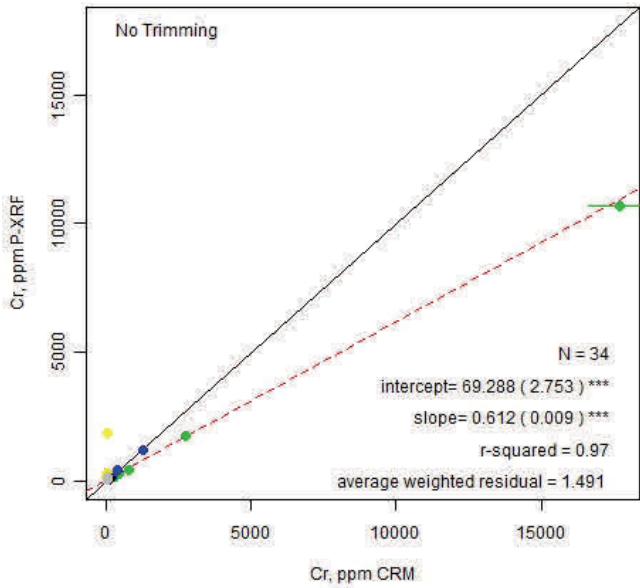
Benchtop-BTAM-Mining Mode



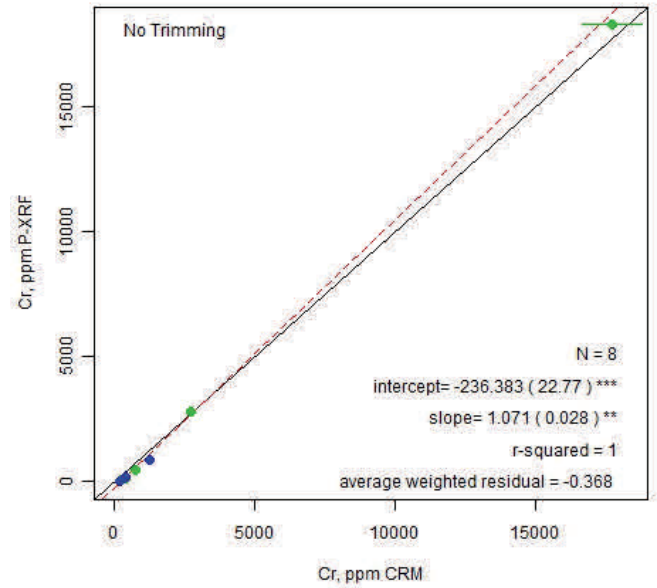
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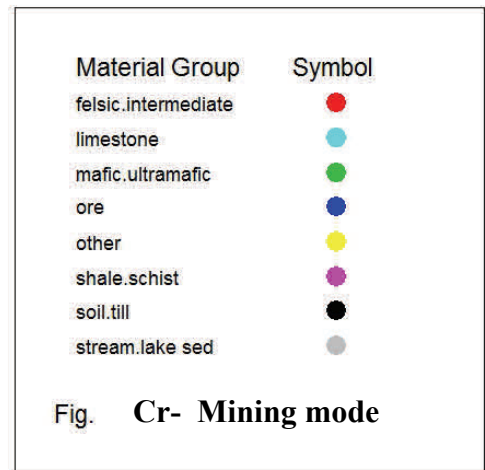
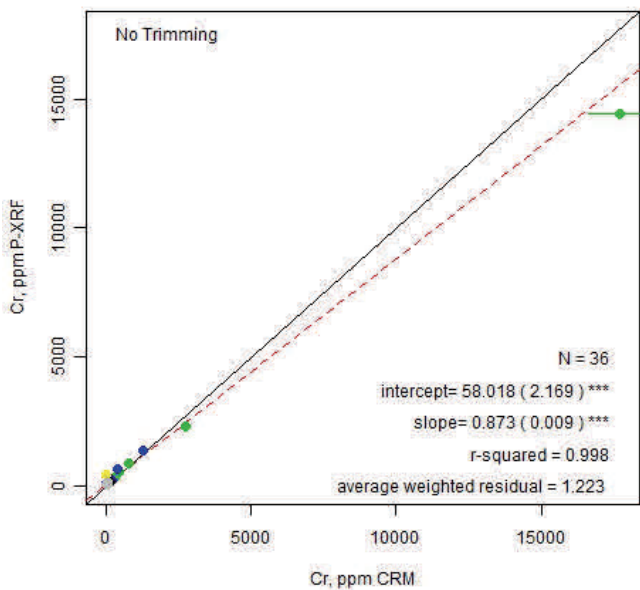
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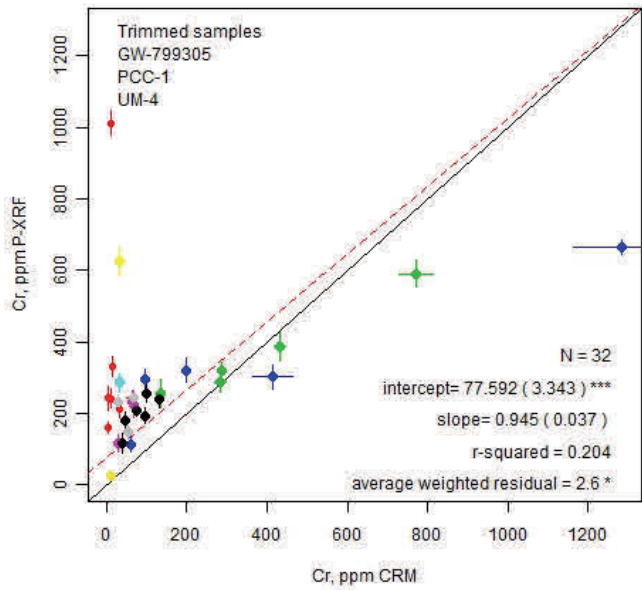
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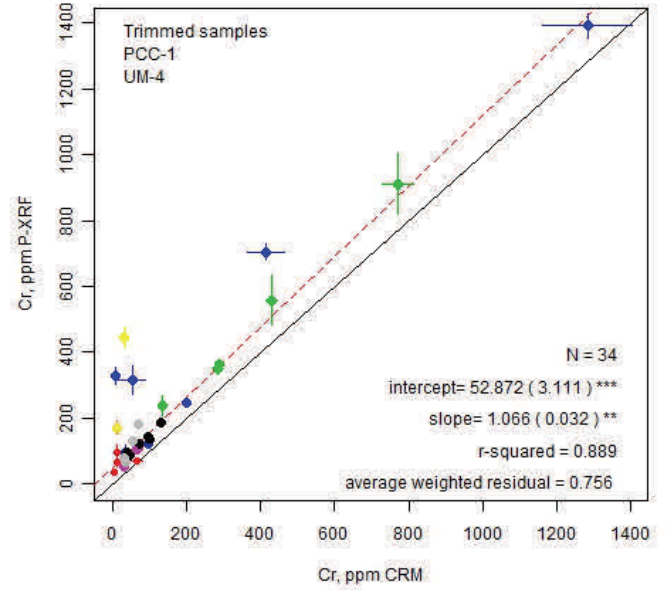
Handheld-HHCM-Mining Mode



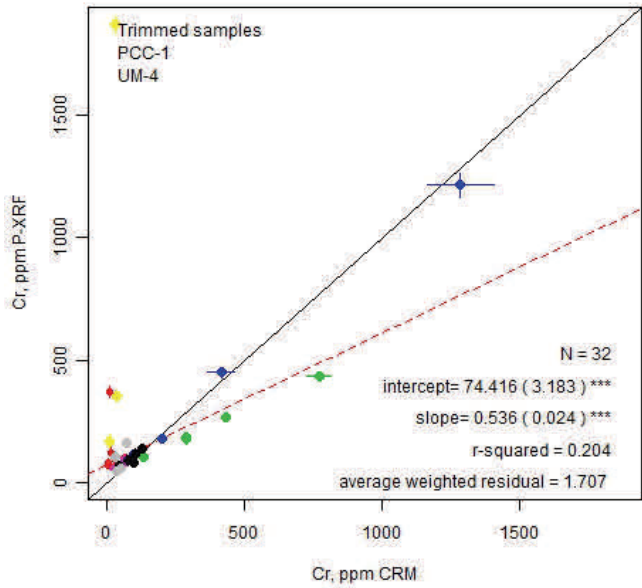
Benchtop-BTAM-Mining Mode



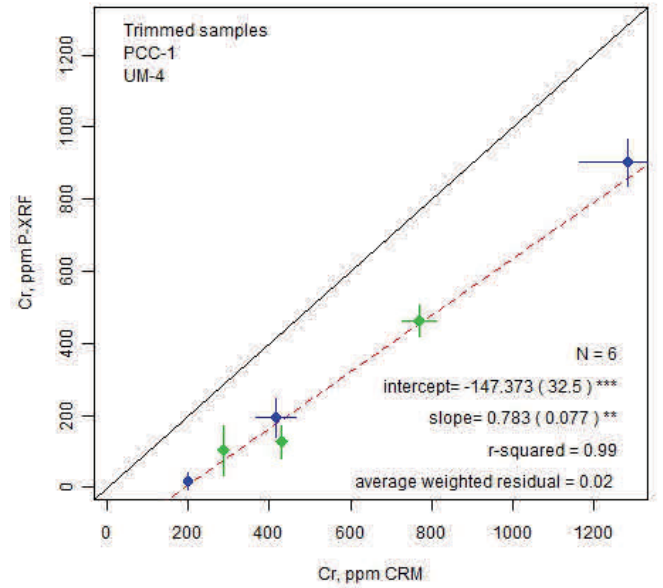
Benchtop-BTBM-Mining Mode



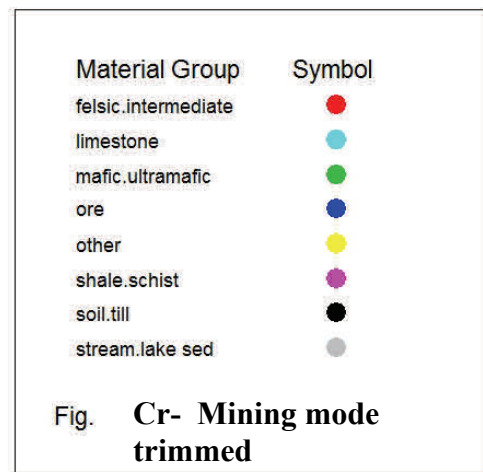
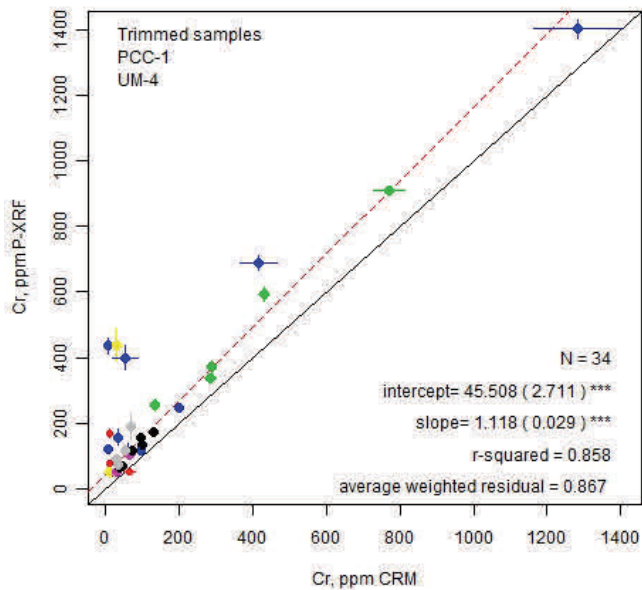
Handheld-HHAM-Mining Mode



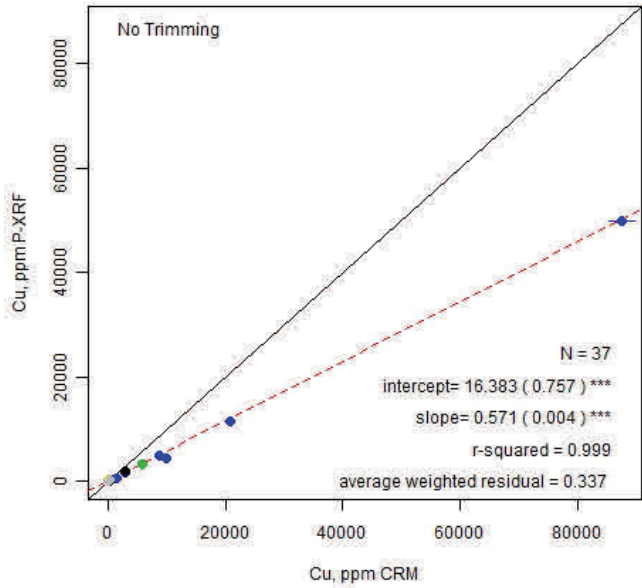
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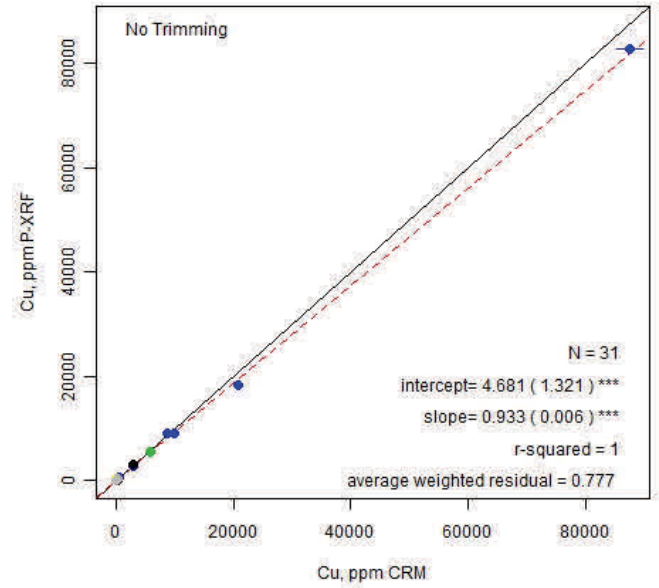
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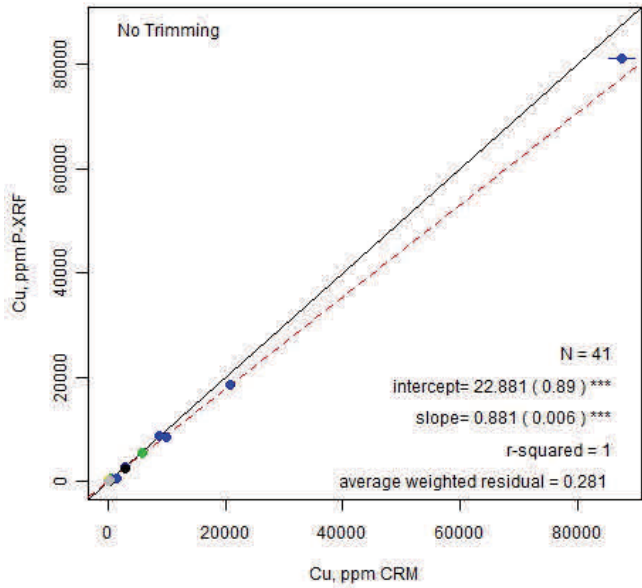
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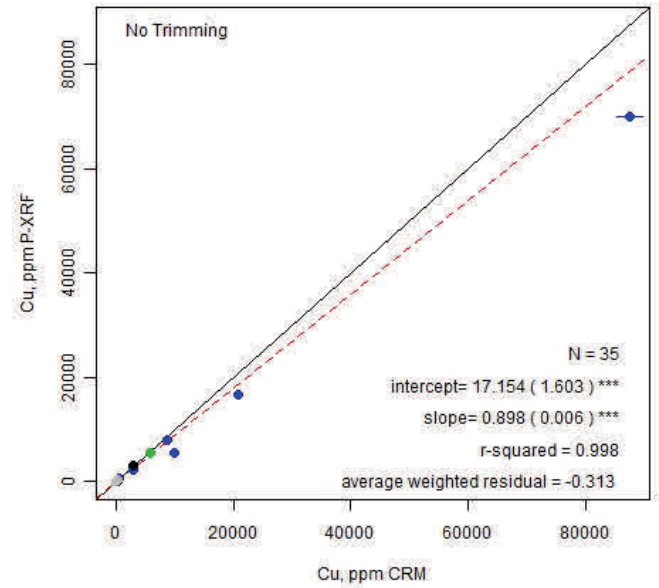
Benchtop-BTBM-Mining Mode



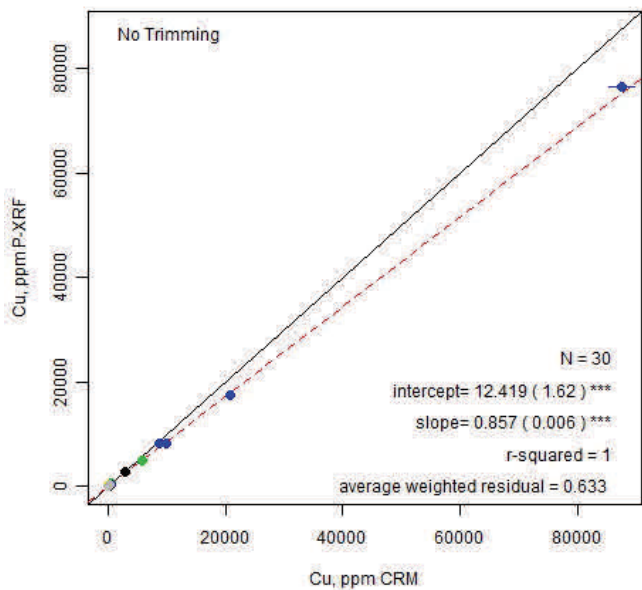
Handheld-HHAM-Mining Mode



Handheld-HHBM-Mining Mode



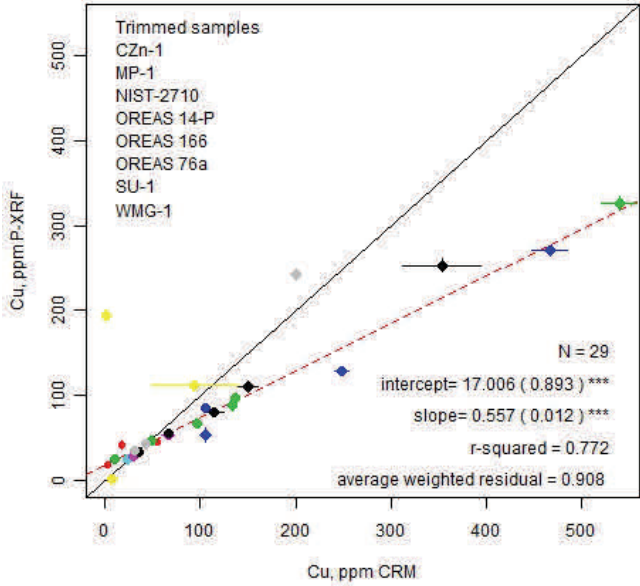
Handheld-HHCM-Mining Mode



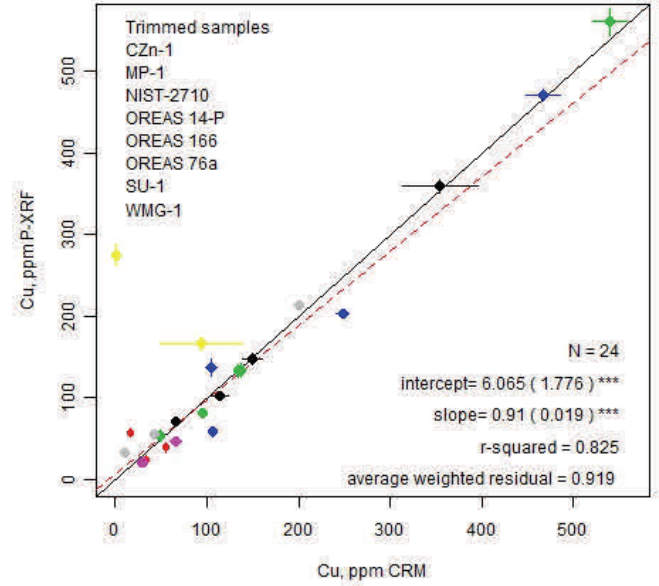
Material Group	Symbol
felsic.intermediate	●
limestone	●
mafic.ultramafic	●
ore	●
other	●
shale.schist	●
soil.till	●
stream.lake sed	●

Fig. Cu- Mining mode

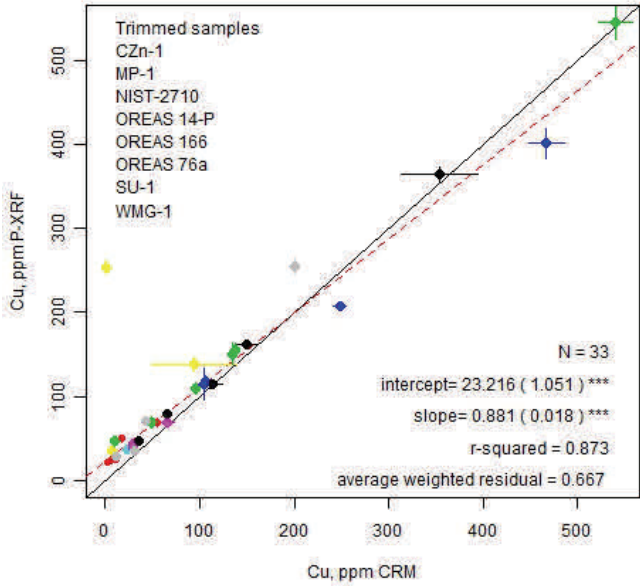
Benchtop-BTAM-Mining Mode



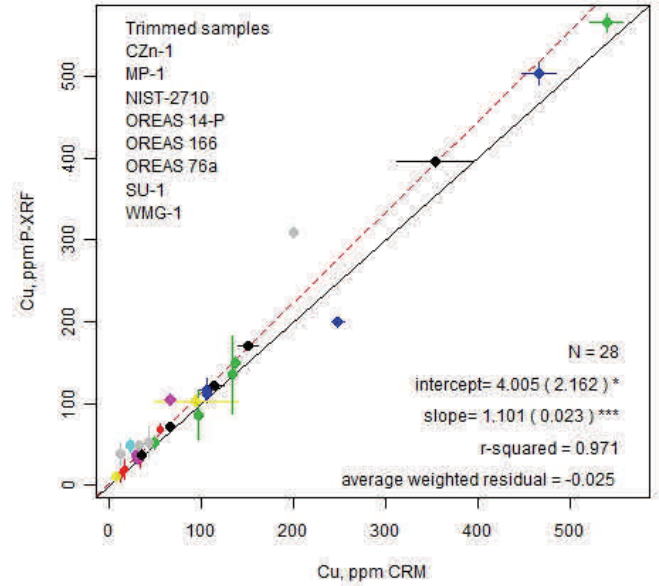
Benchtop-BTBM-Mining Mode



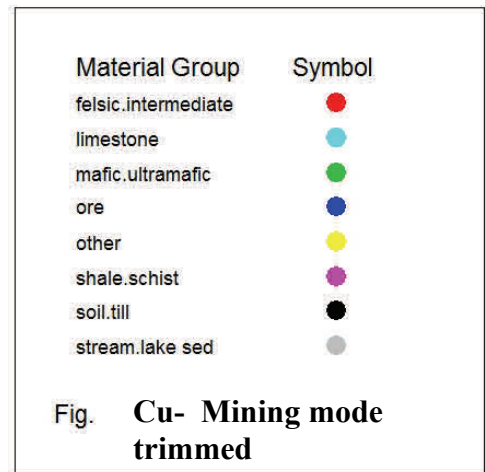
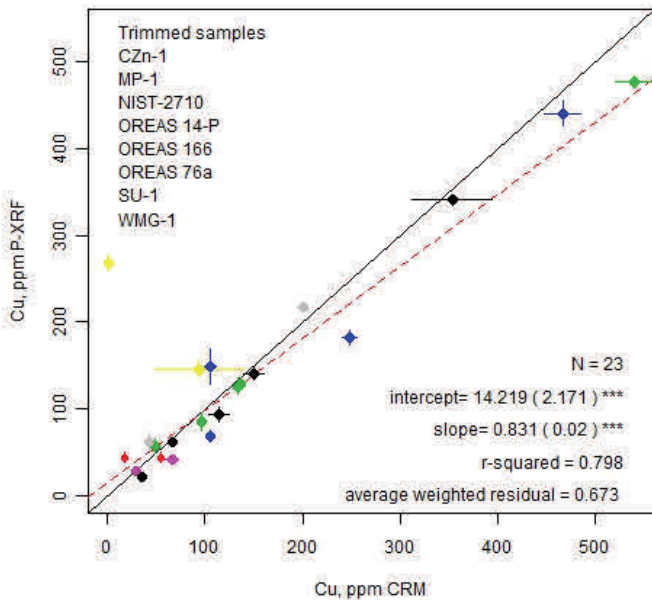
Handheld-HHAM-Mining Mode



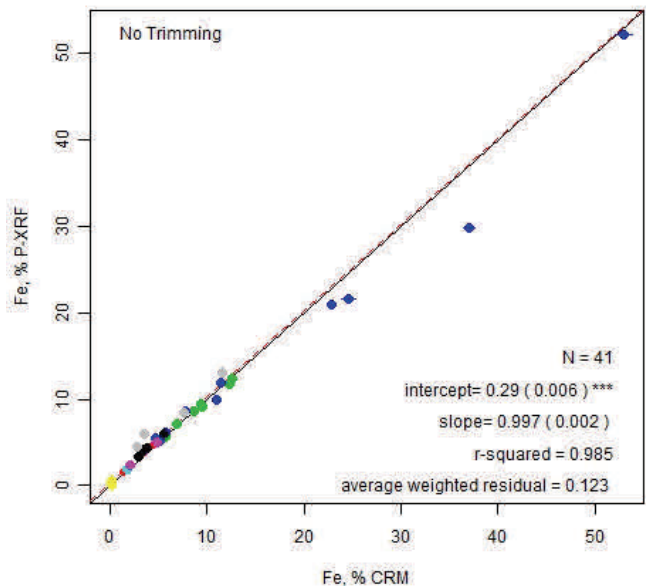
Handheld-HHBM-Mining Mode



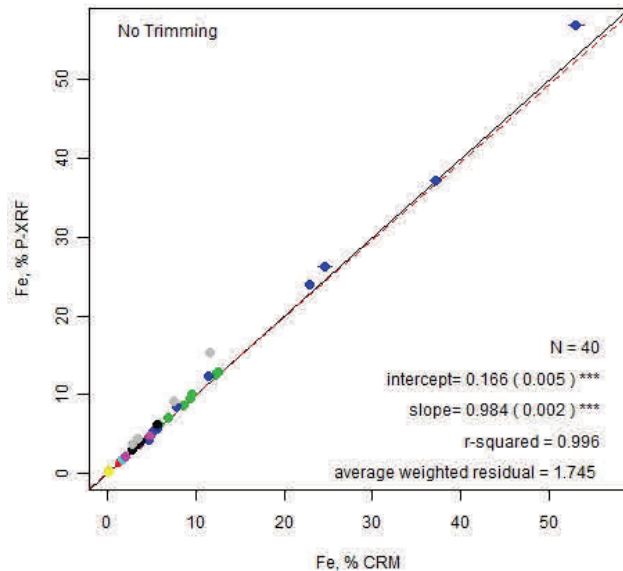
Handheld-HHCM-Mining Mode



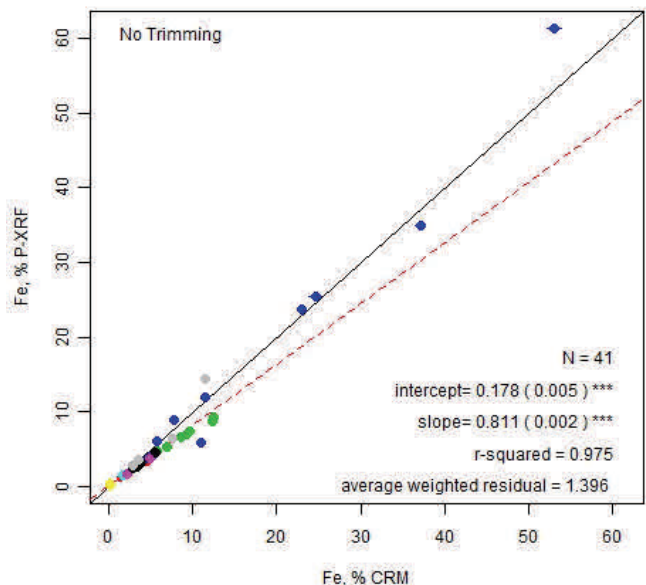
Benchtop-BTAM-Mining Mode



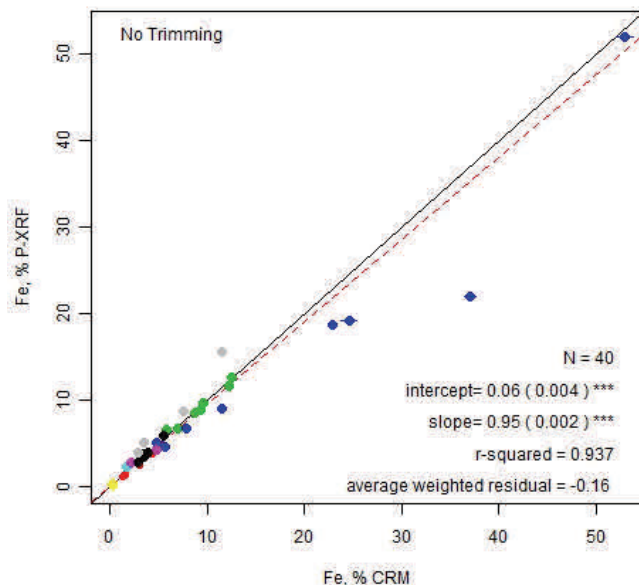
Benchtop-BTBM-Mining Mode



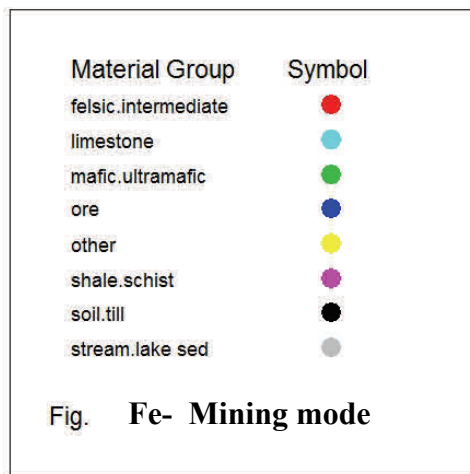
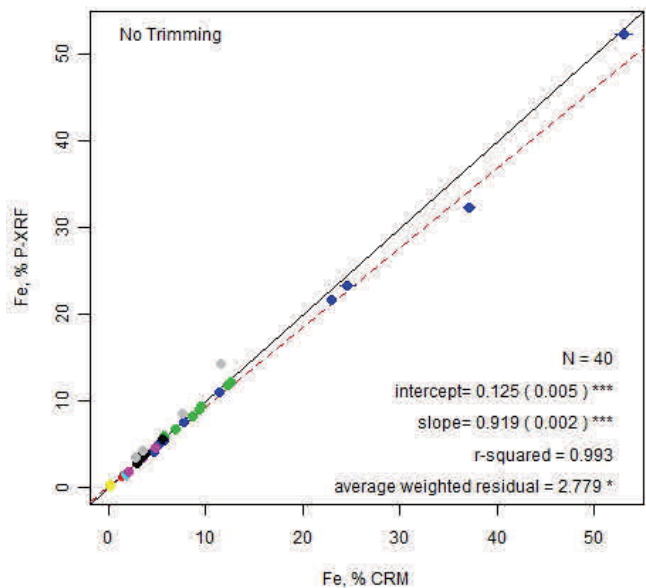
Handheld-Machine A-Mining Mode



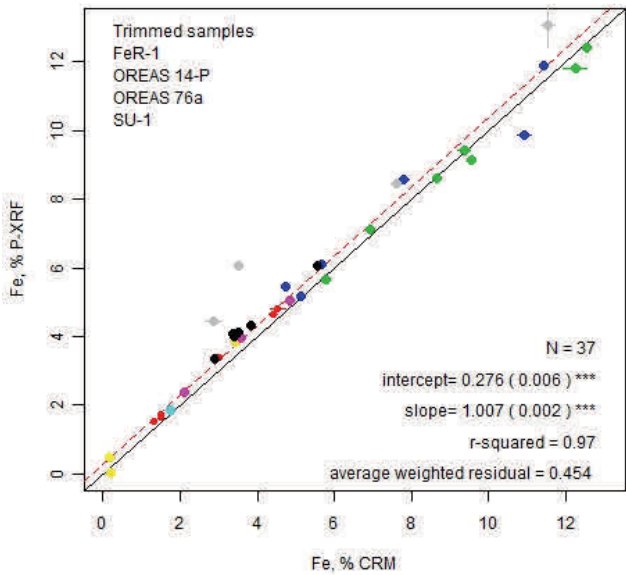
Handheld-HHBM-Mining Mode



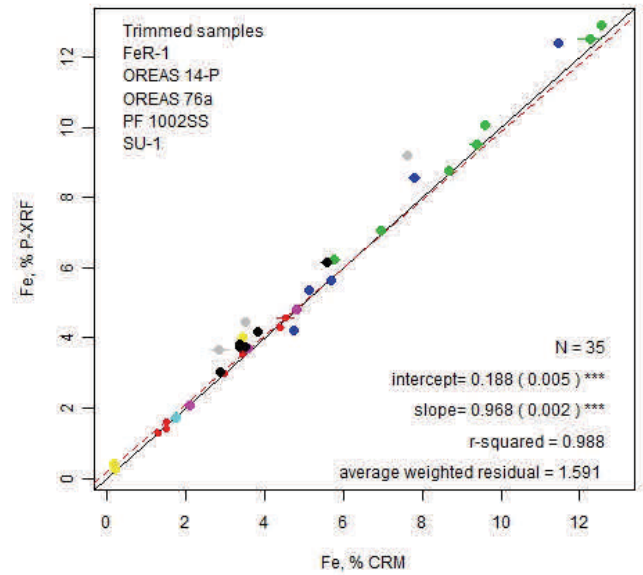
Handheld-HHCM-Mining Mode



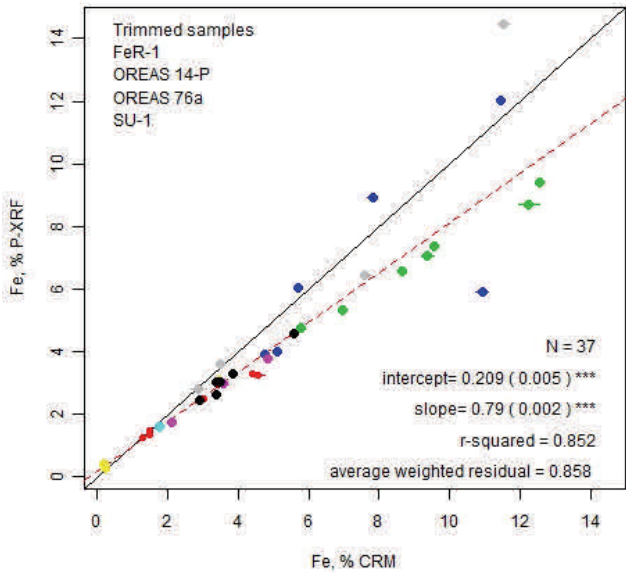
Benchtop-BTAM-Mining Mode



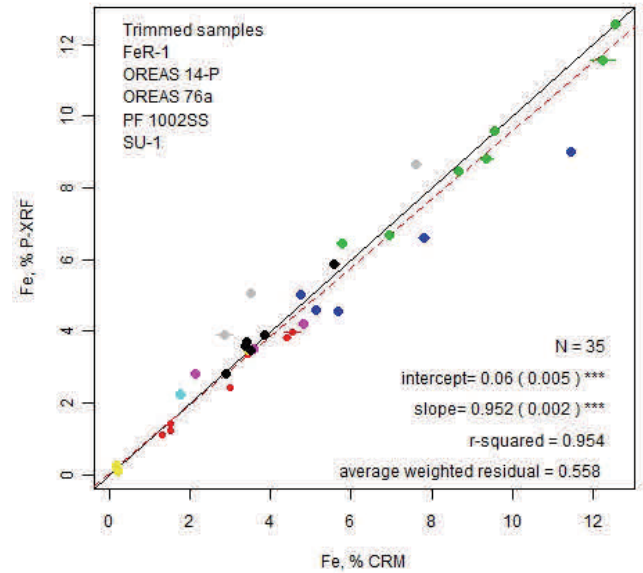
Benchtop-BTBM-Mining Mode



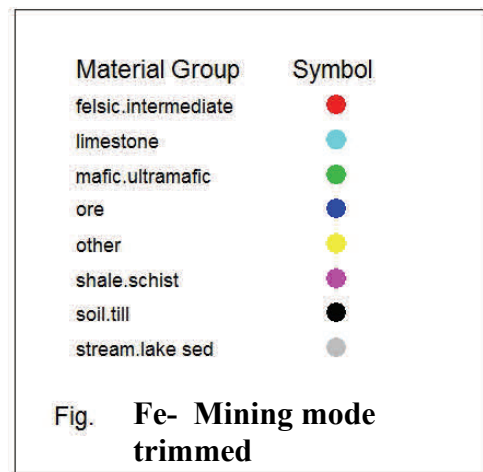
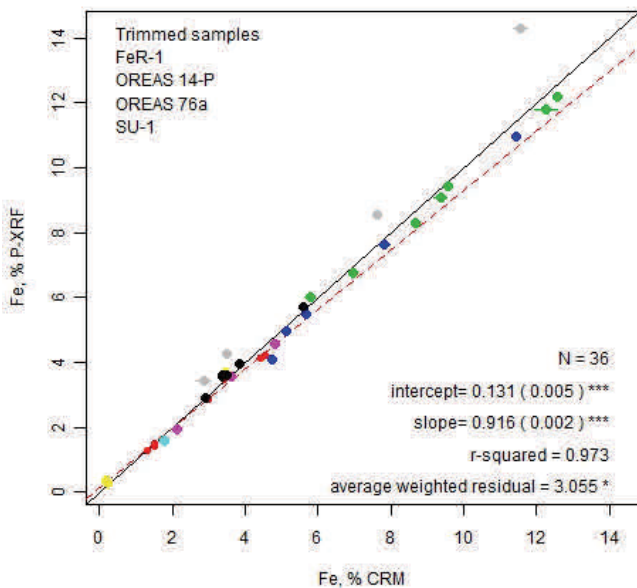
Handheld-Machine A-Mining Mode



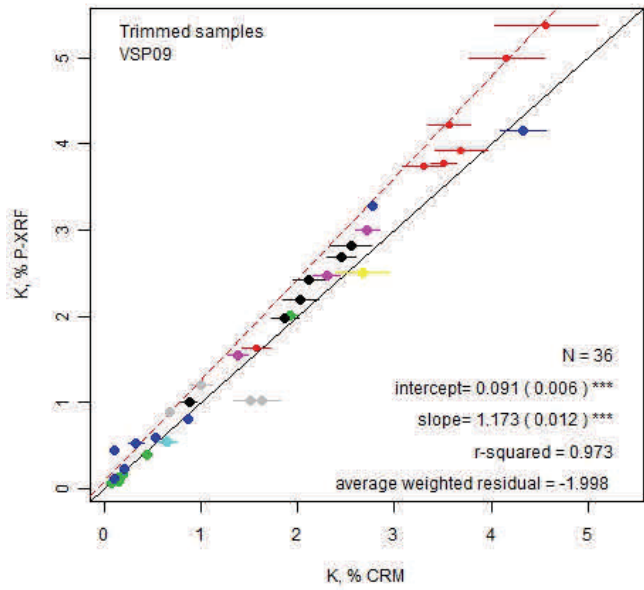
Handheld-HHBM-Mining Mode



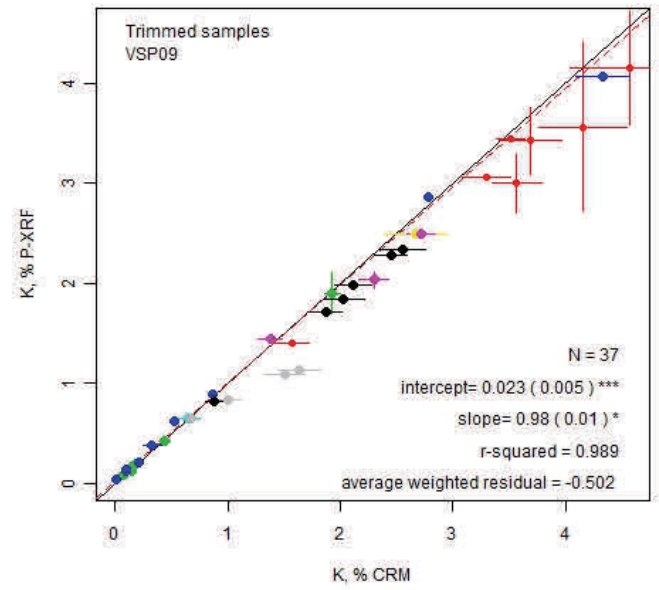
Handheld-HHCM-Mining Mode



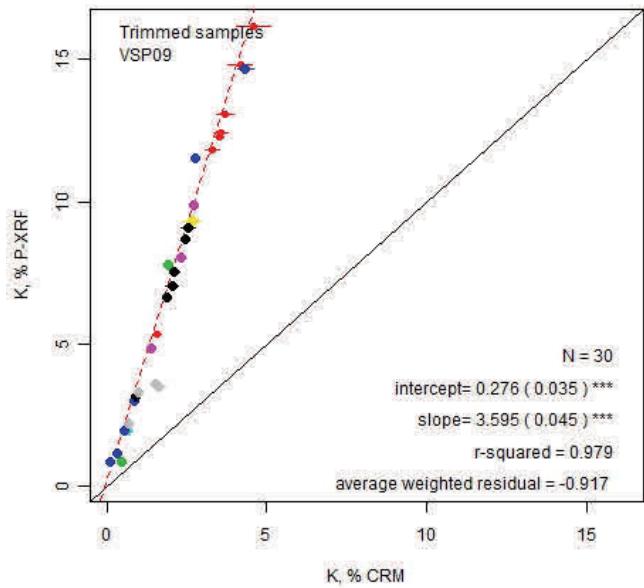
Benchtop-BTAM-Mining Mode



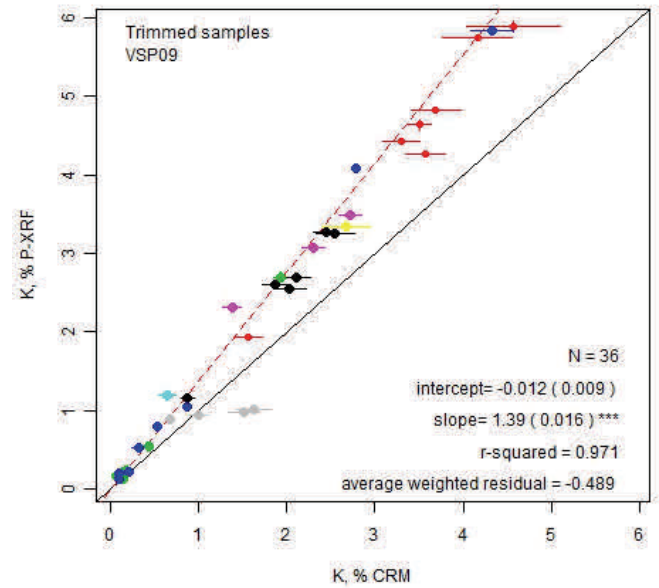
Benchtop-BTBM-Mining Mode



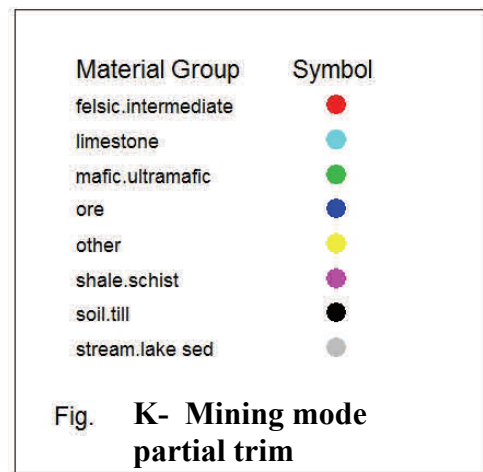
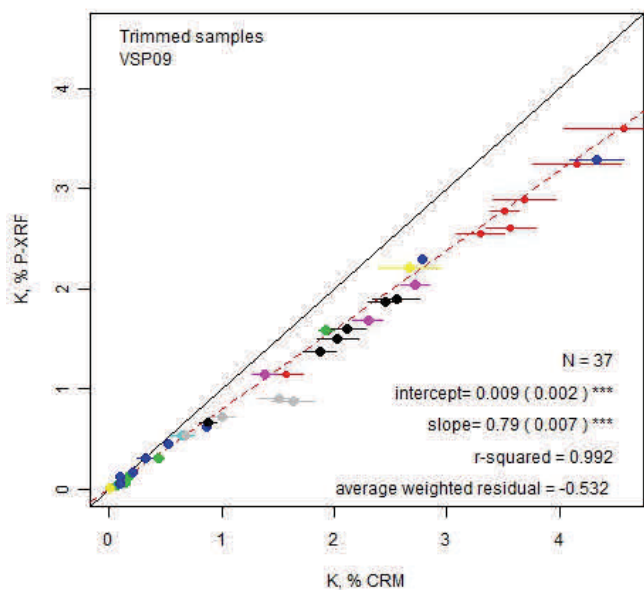
Handheld-Machine A-Mining Mode



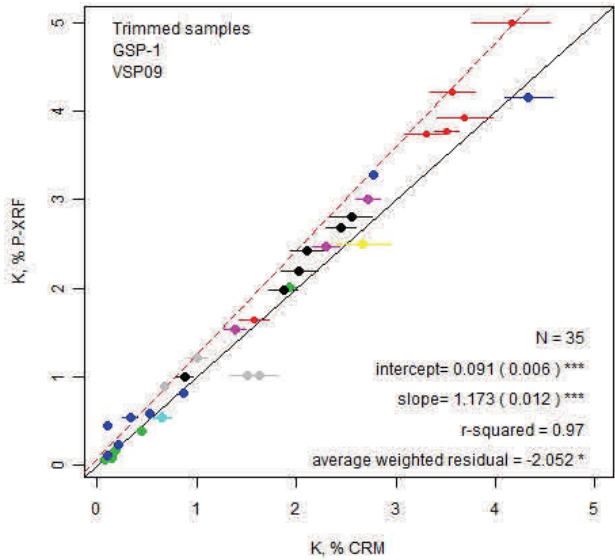
Handheld-HHBM-Mining Mode



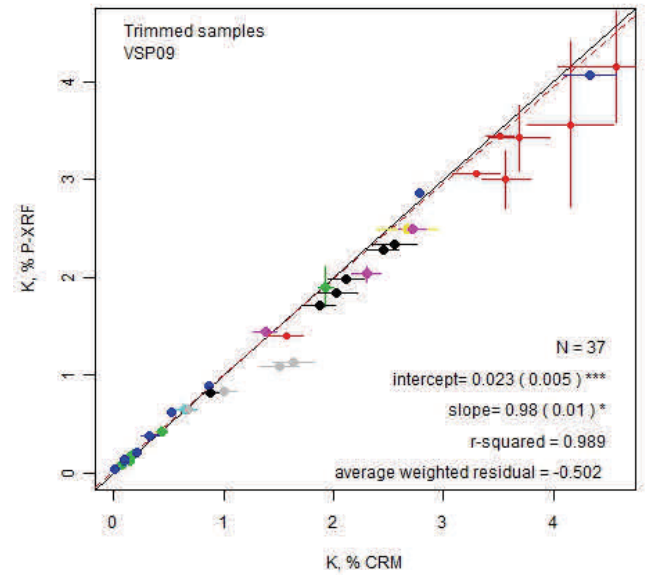
Handheld-HHCM-Mining Mode



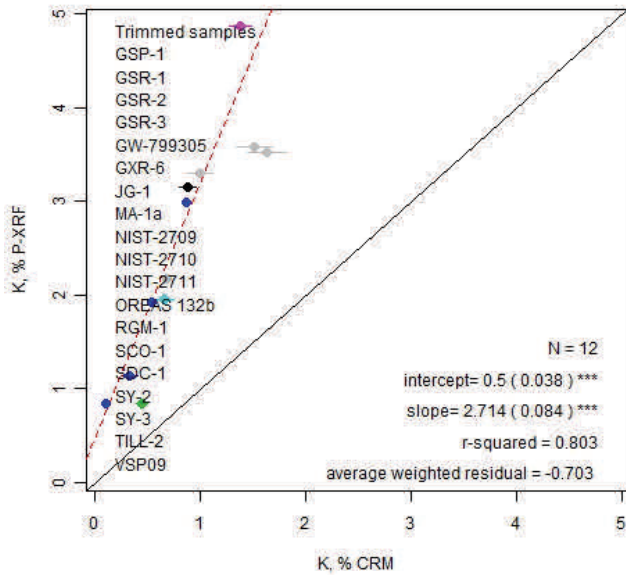
Benchtop-BTAM-Mining Mode



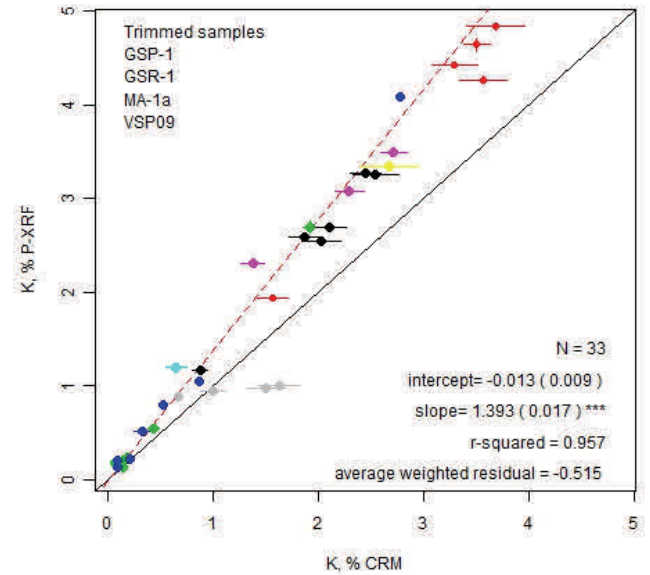
Benchtop-BTBM-Mining Mode



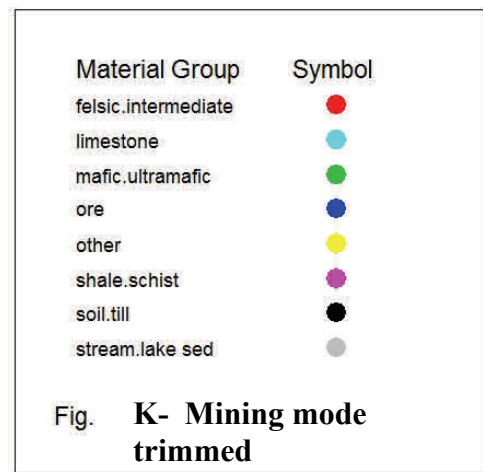
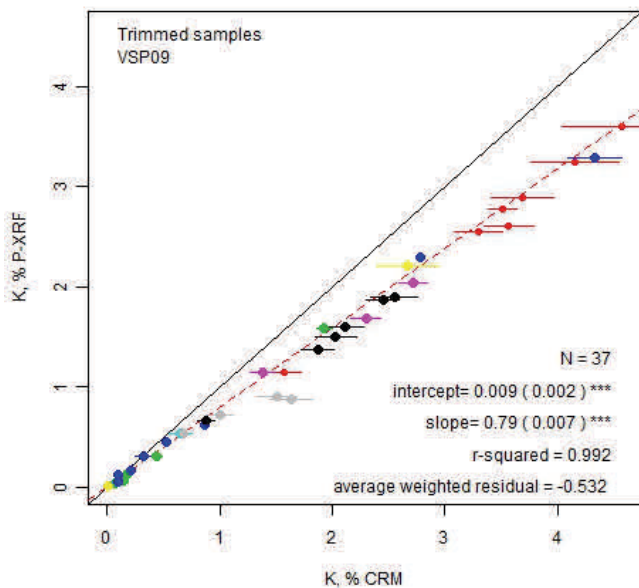
Handheld-HHAM-Mining Mode



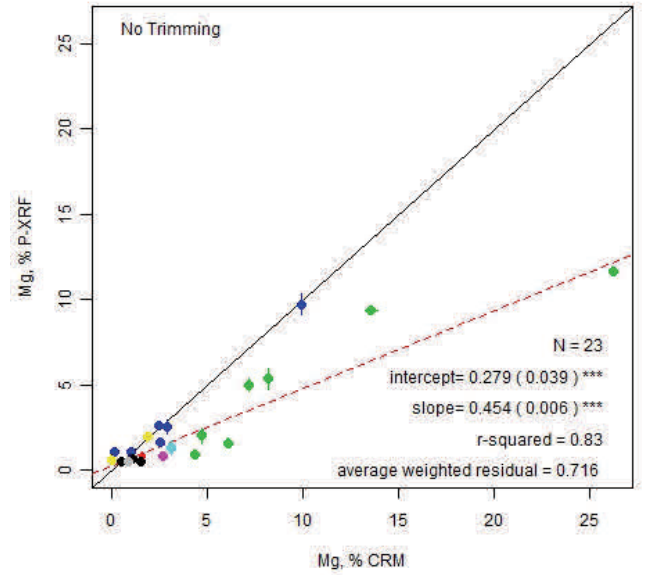
Handheld-HHBM-Mining Mode



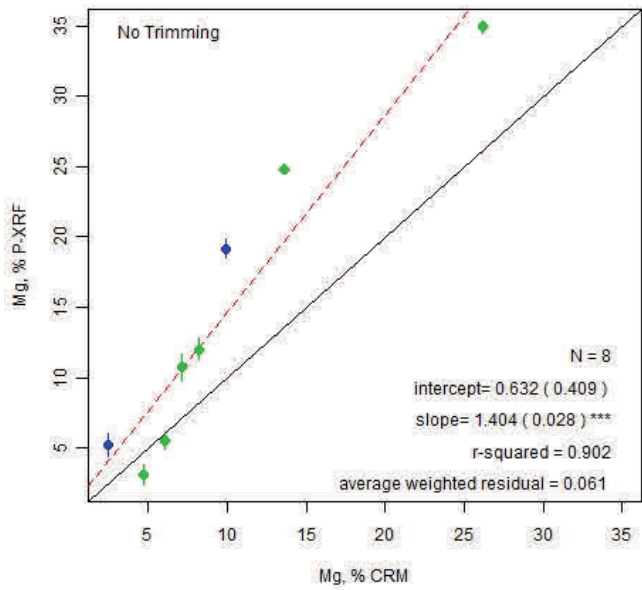
Handheld-HHCM-Mining Mode



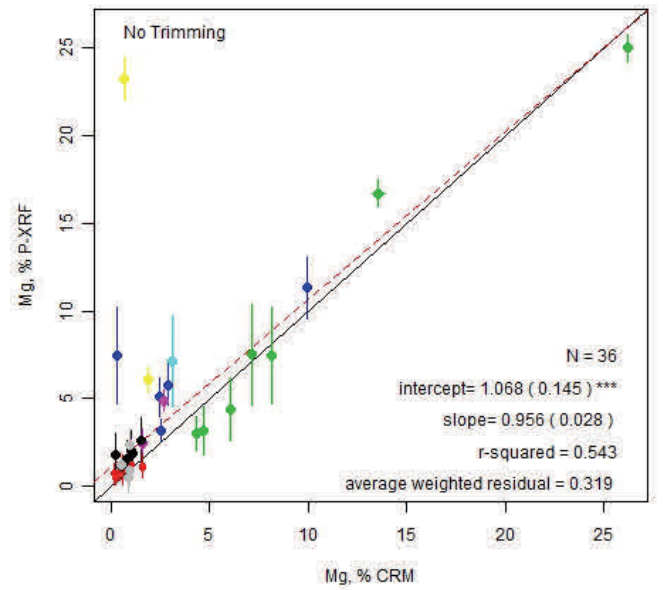
Benchtop-BTBM-Mining Mode



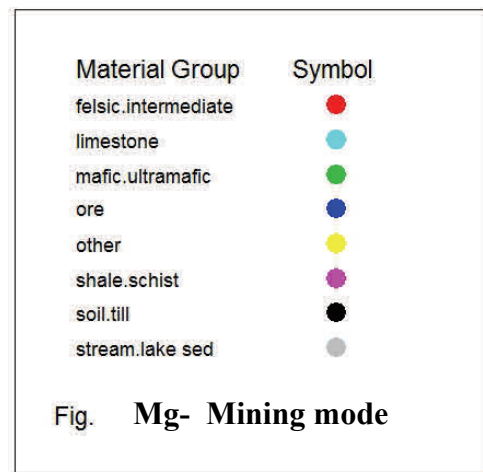
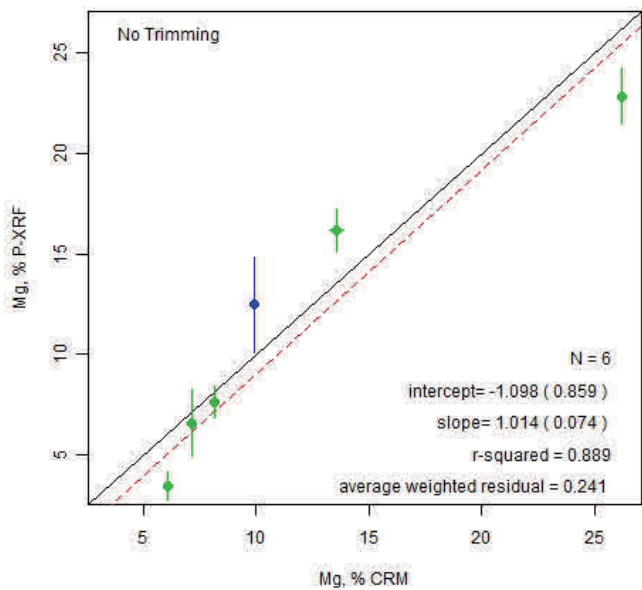
Handheld-Machine A-Mining Mode



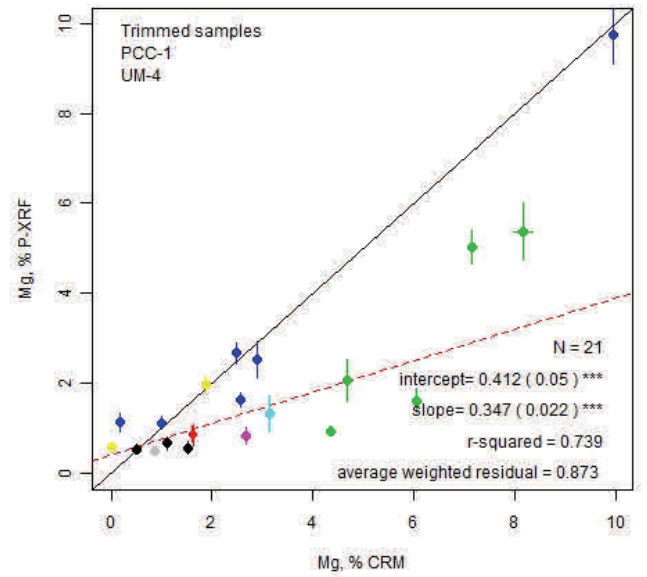
Handheld-HHBM-Mining Mode



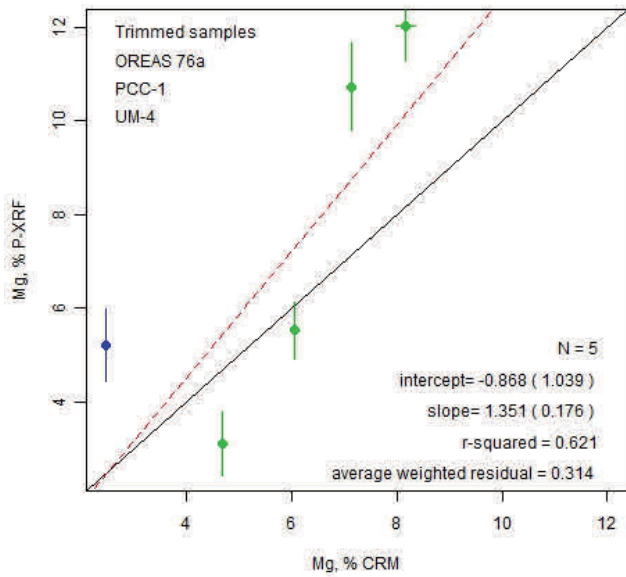
Handheld-HHCM-Mining Mode



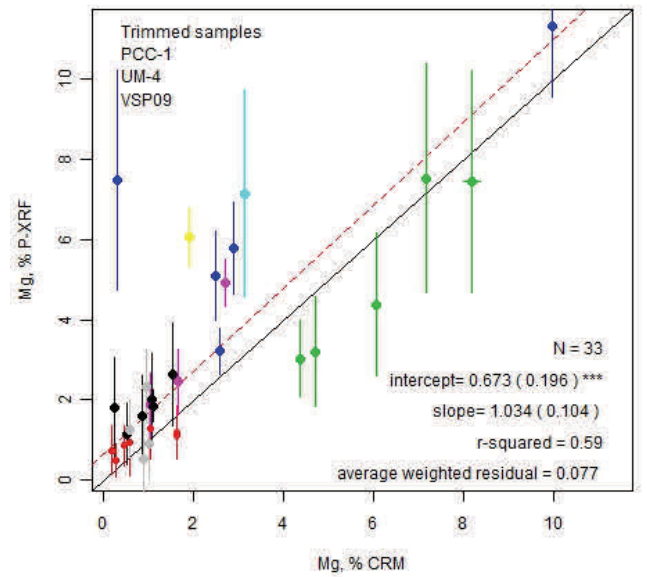
Benchtop-BTBM-Mining Mode



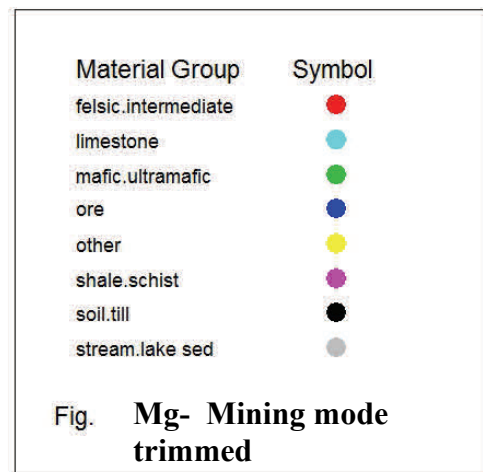
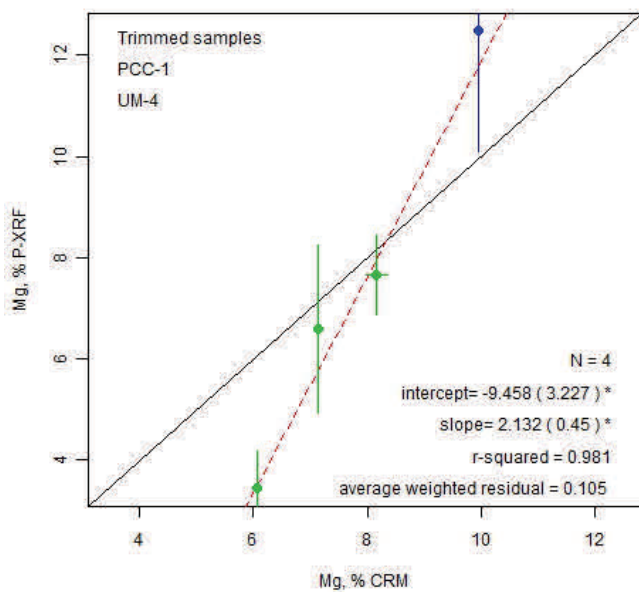
Handheld-HHAM-Mining Mode



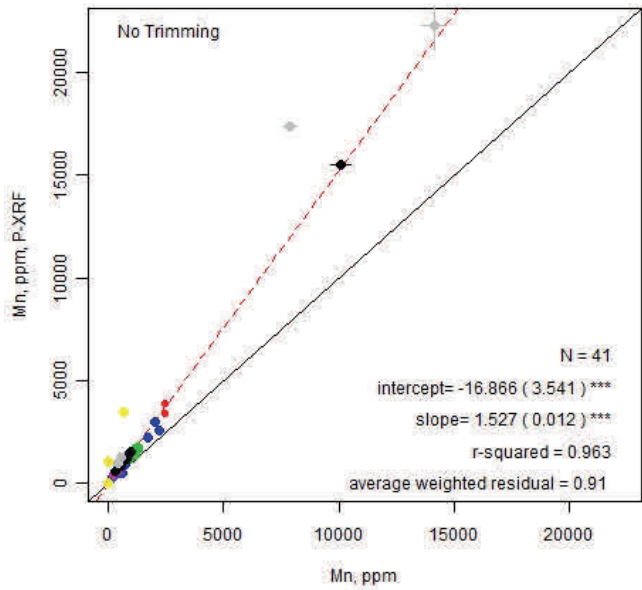
Handheld-HHBM-Mining Mode



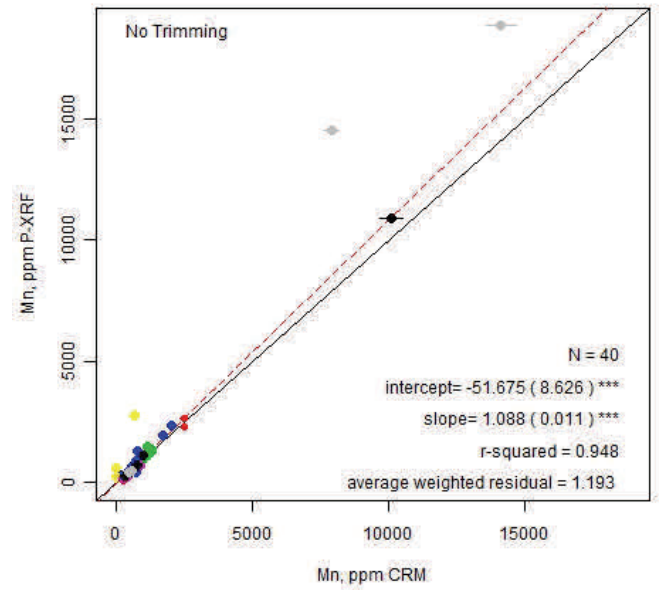
Handheld-HHCM-Mining Mode



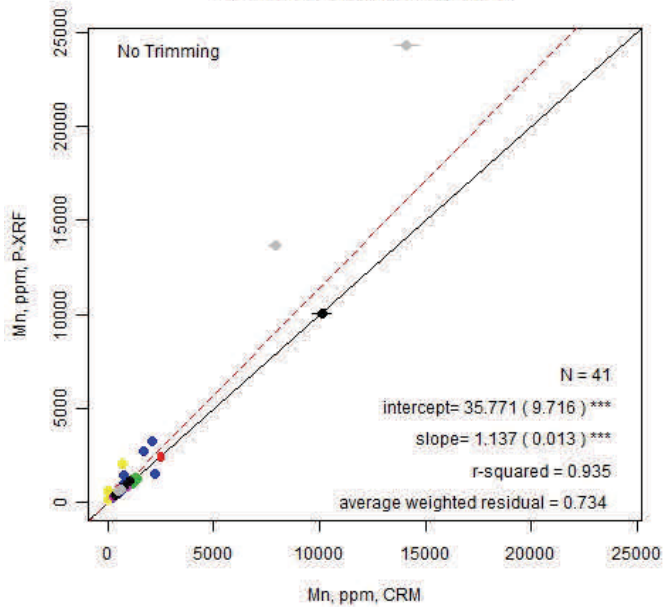
Benchtop-BTAM-Mining Mode



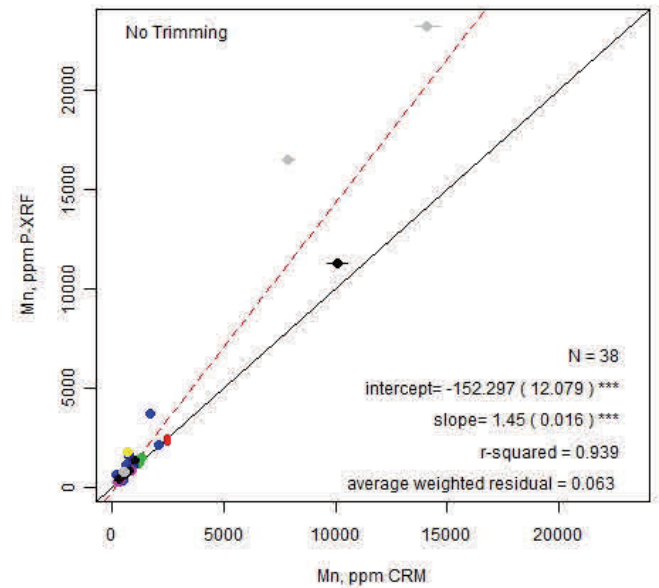
Benchtop-BTBM-Mining Mode



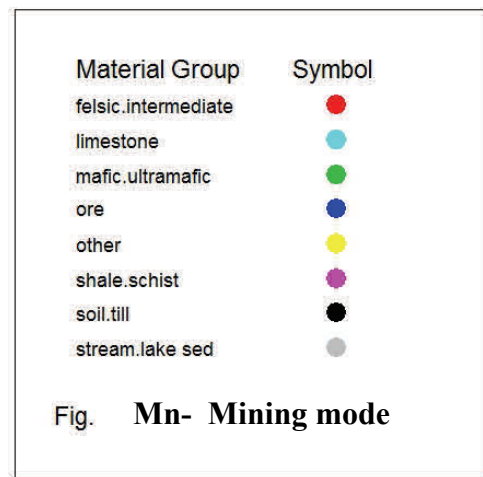
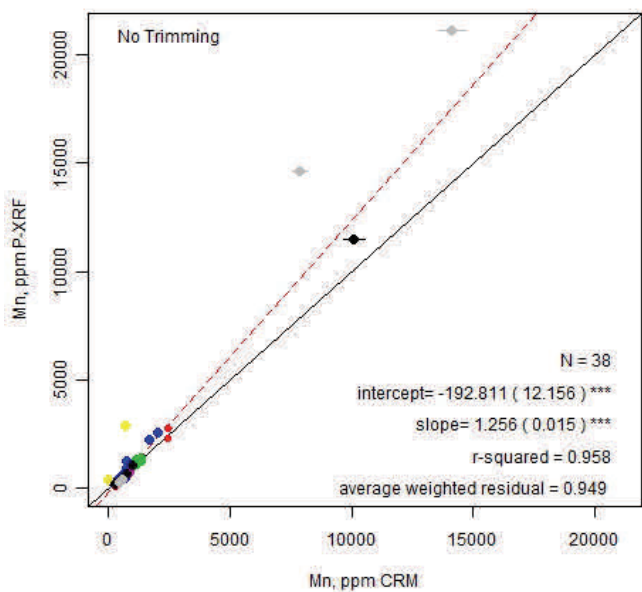
Handheld-HHAM-Mining Mode



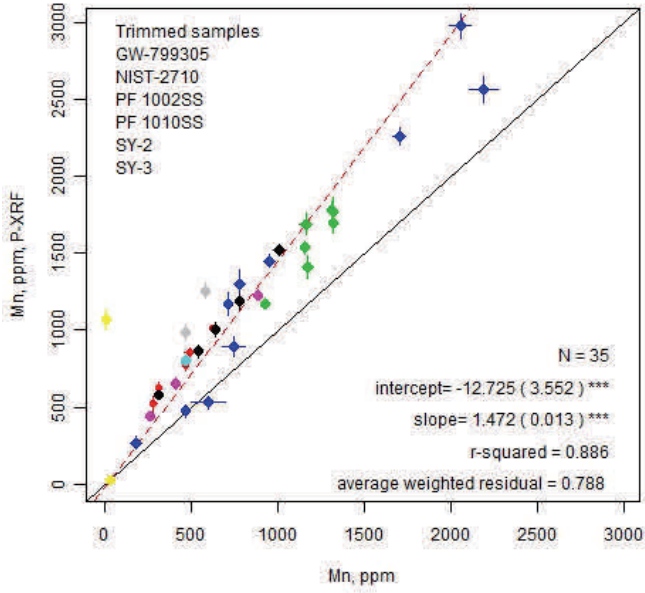
Handheld-HHBM-Mining Mode



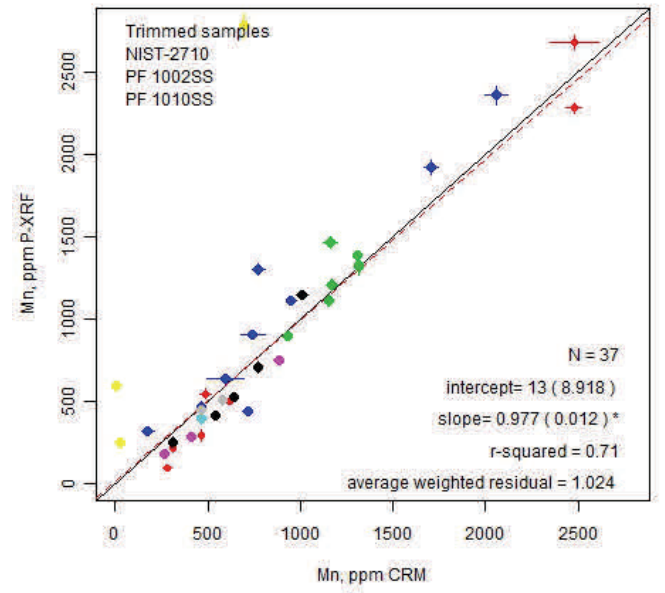
Handheld-HHCM-Mining Mode



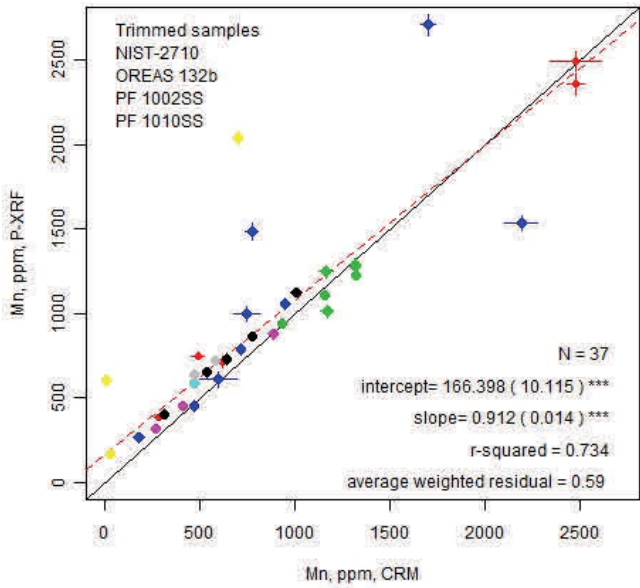
Benchtop-BTAM-Mining Mode



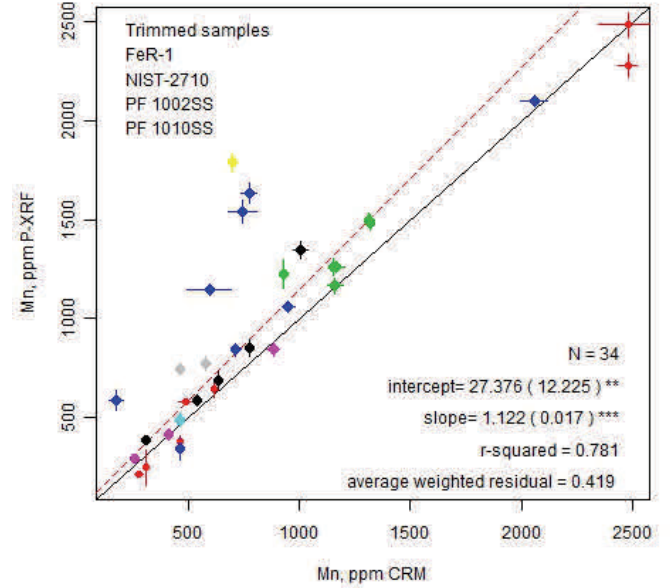
Benchtop-BTBM-Mining Mode



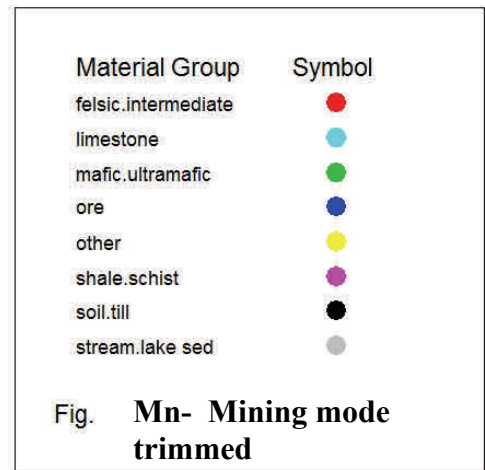
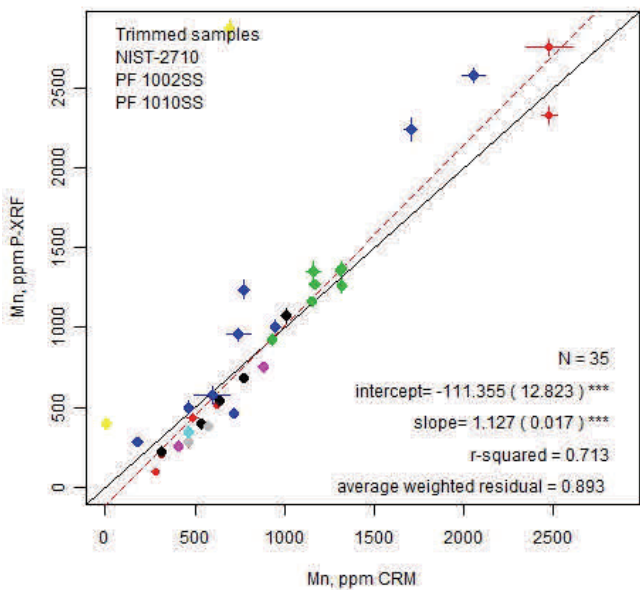
Handheld-HHAM-Mining Mode



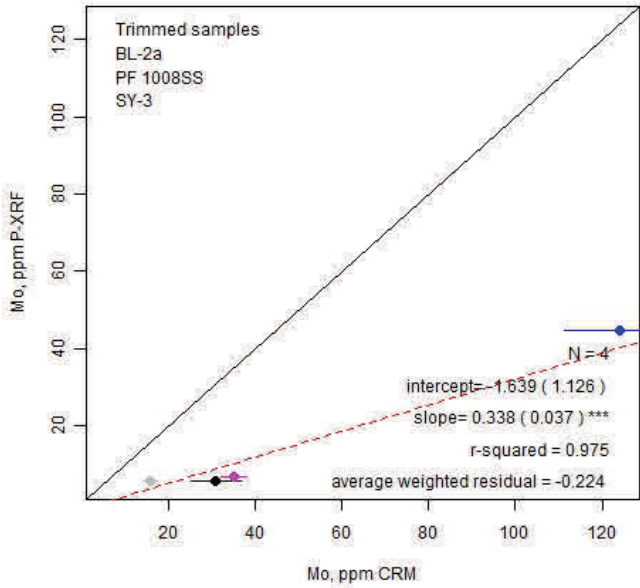
Handheld-HHBM-Mining Mode



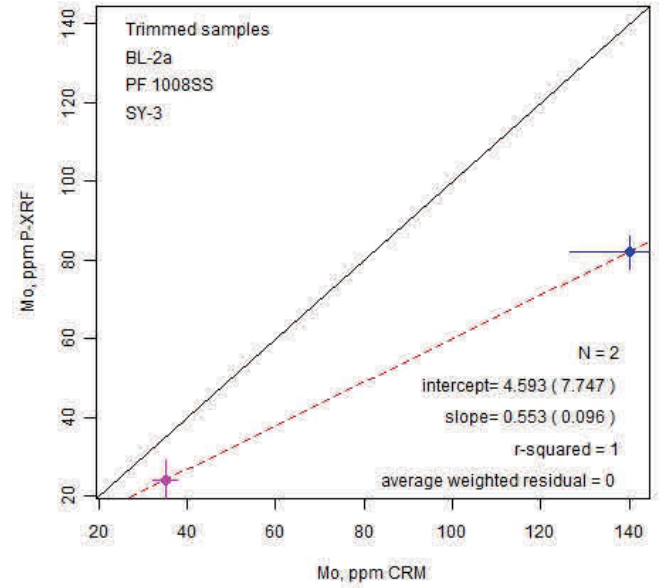
Handheld-HHCM-Mining Mode



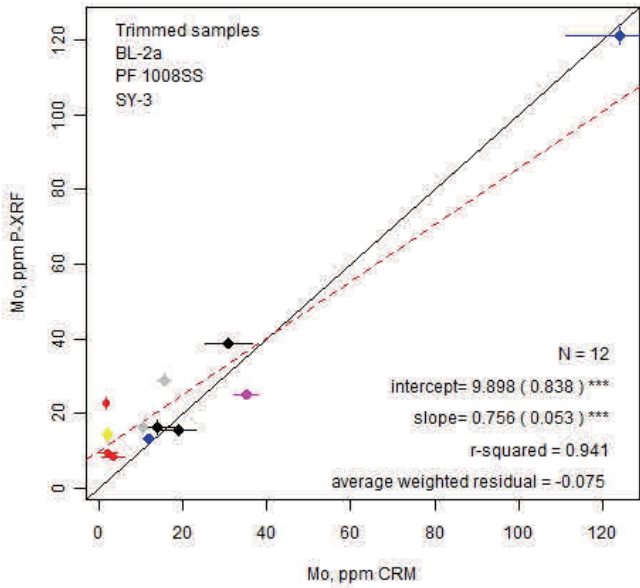
Benchtop-BTAM-Mining Mode



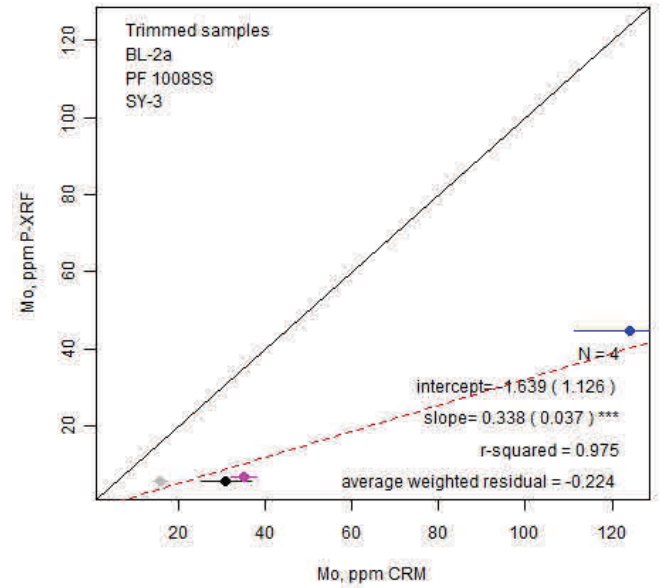
Benchtop-BTBM-Mining Mode



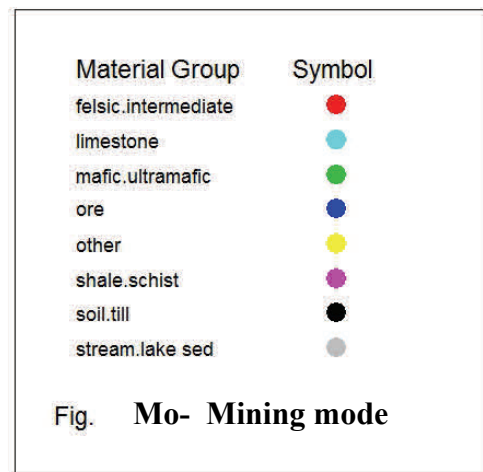
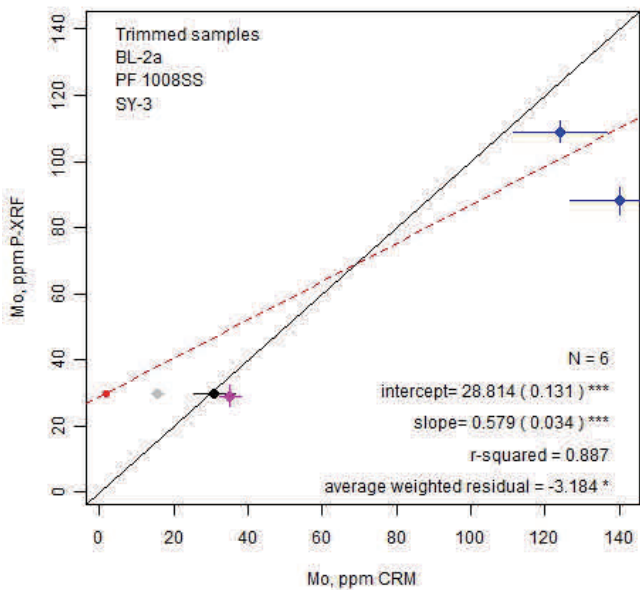
Handheld-Machine A-Mining Mode



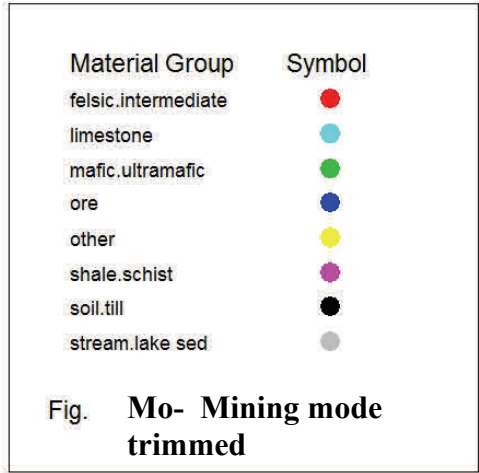
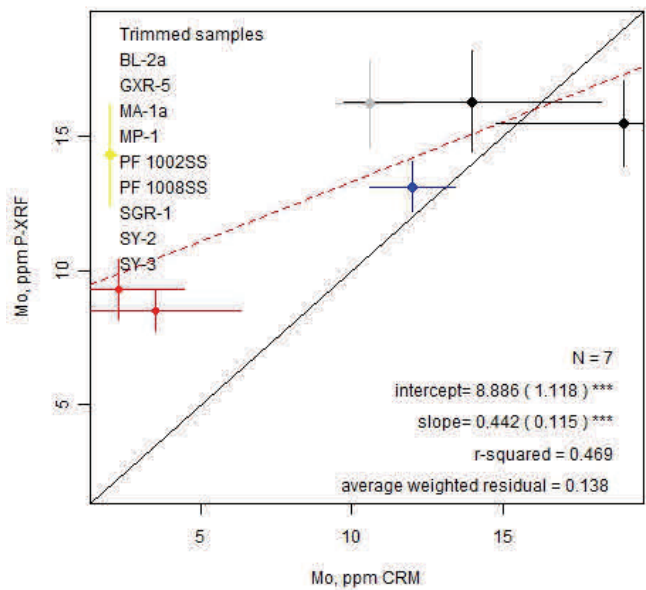
Benchtop-BTAM-Mining Mode



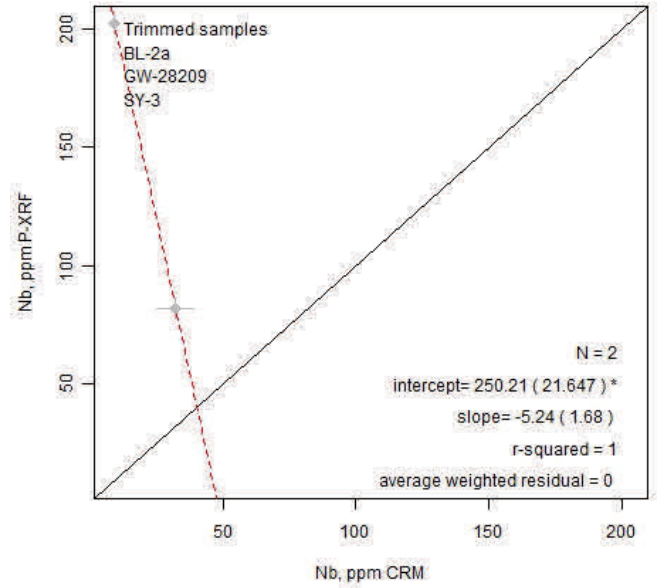
Handheld-HHCM-Mining Mode



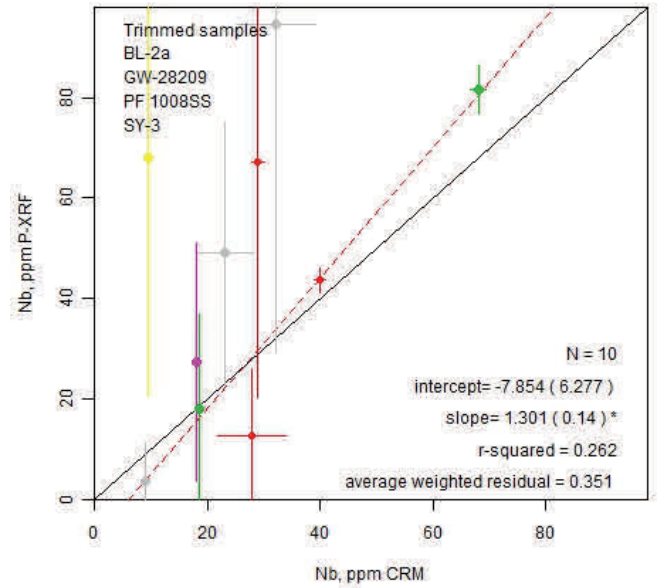
Handheld-HHAM-Mining Mode



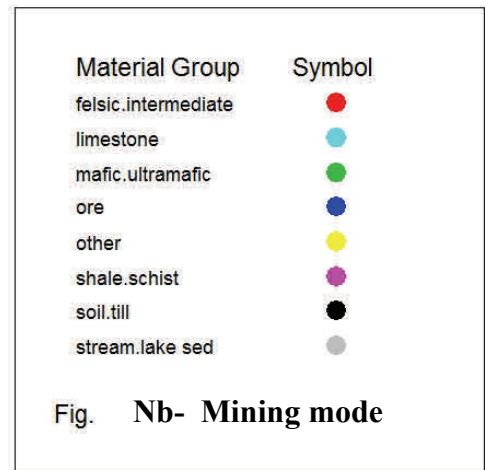
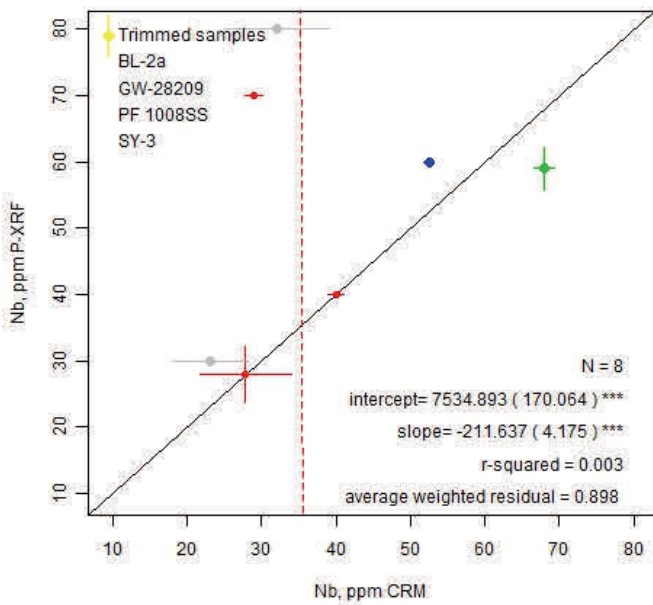
Benchtop-BTBM-Mining Mode



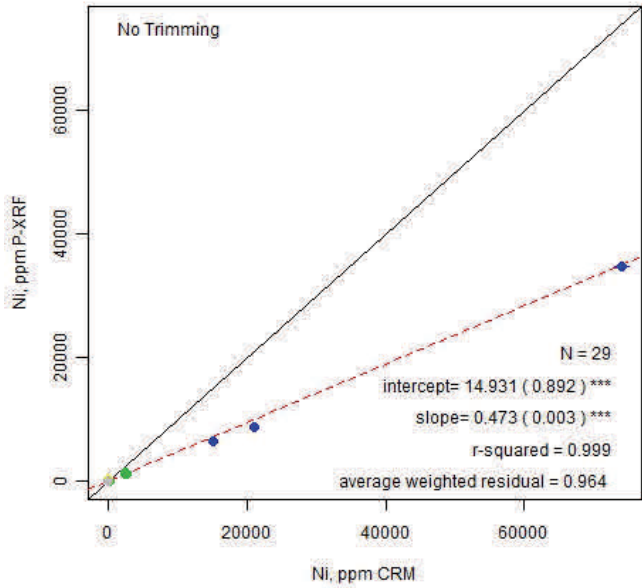
Handheld-HHBM-Mining Mode



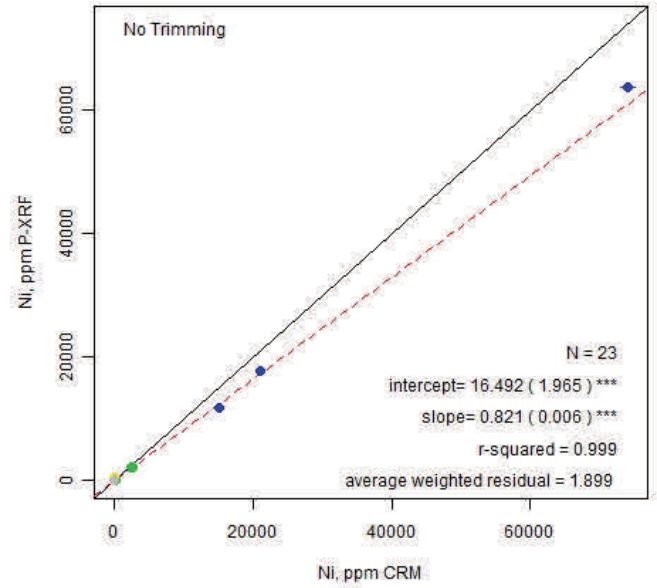
Handheld-HHCM-Mining Mode



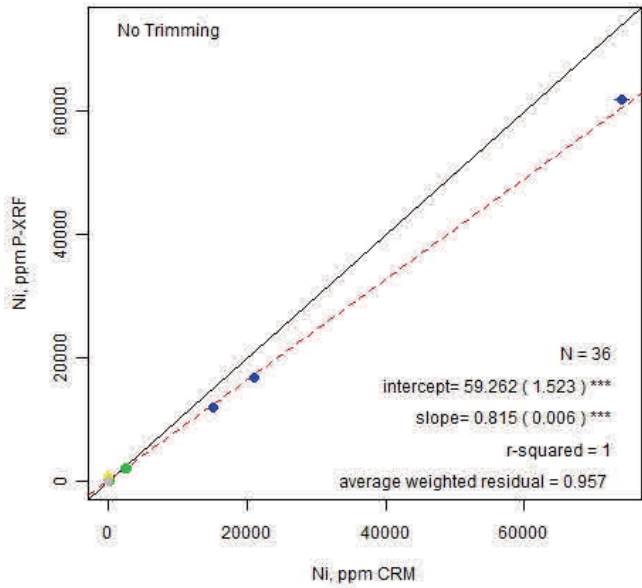
Benchtop-BTAM-Mining Mode



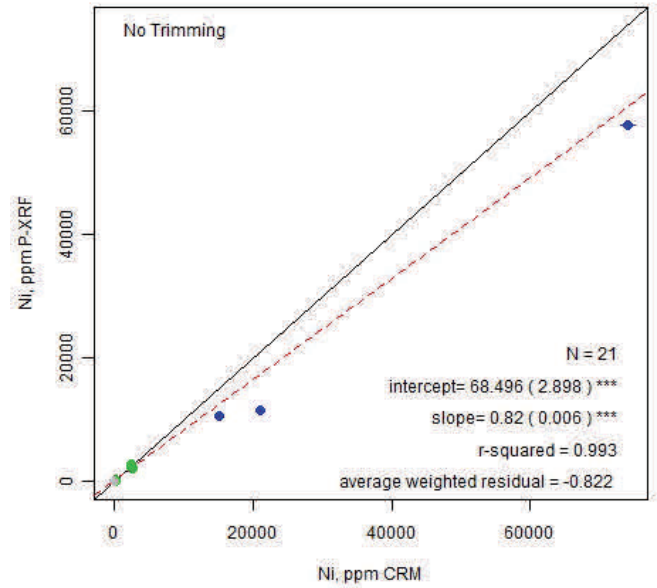
Benchtop-BTBM-Mining Mode



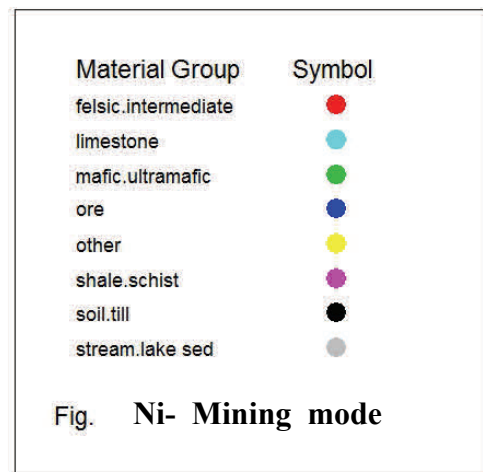
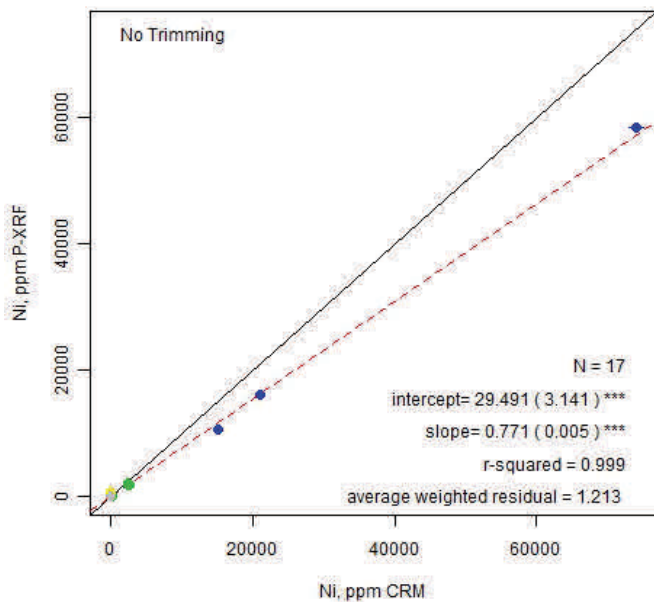
Handheld-HHAM-Mining Mode



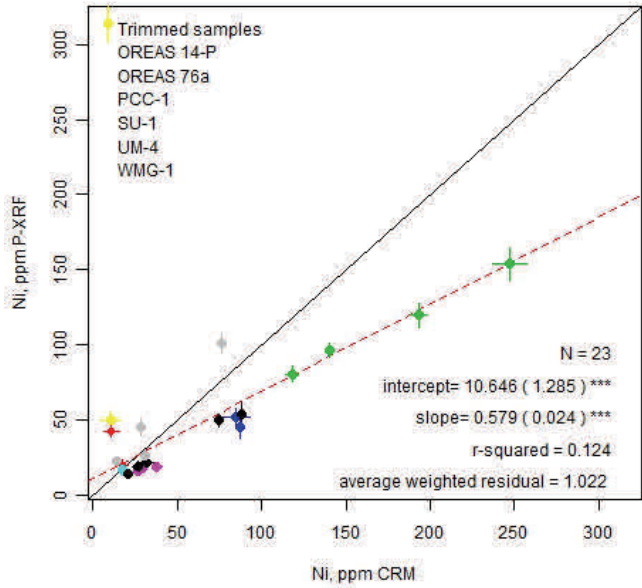
Handheld-HHBM-Mining Mode



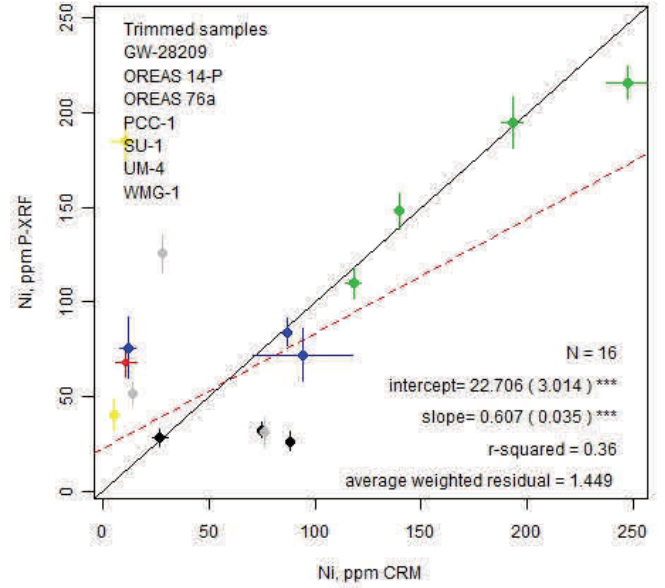
Handheld-HHCM-Mining Mode



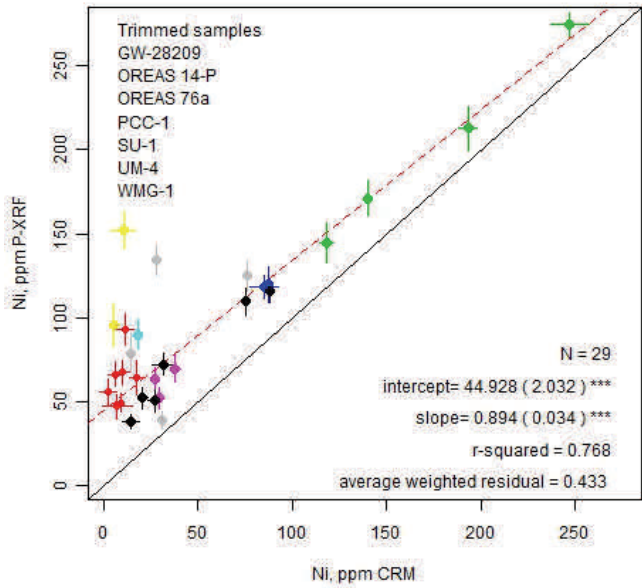
Benchtop-BTAM-Mining Mode



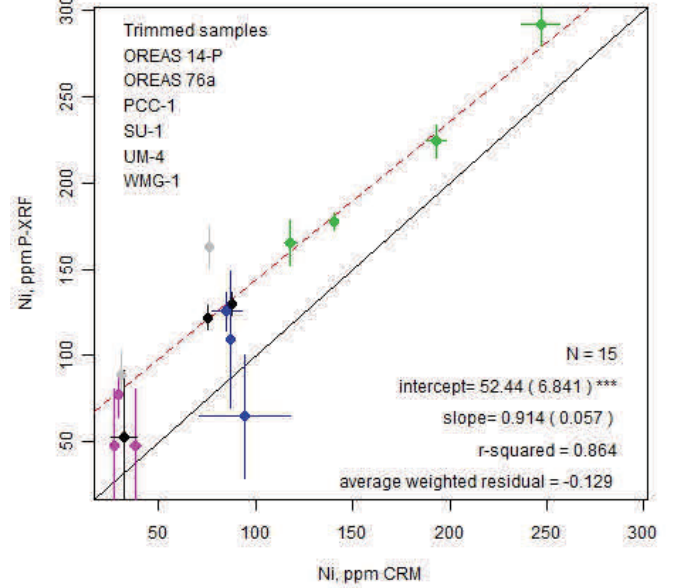
Benchtop-BTBM-Mining Mode



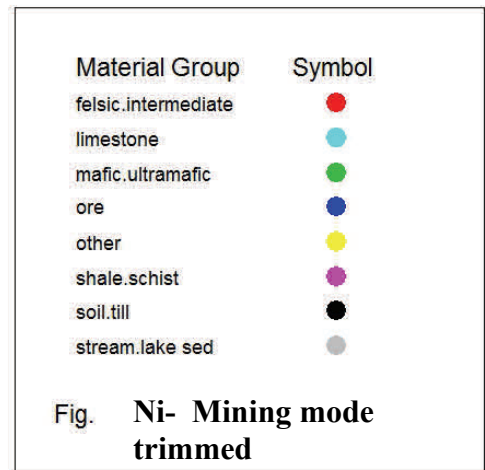
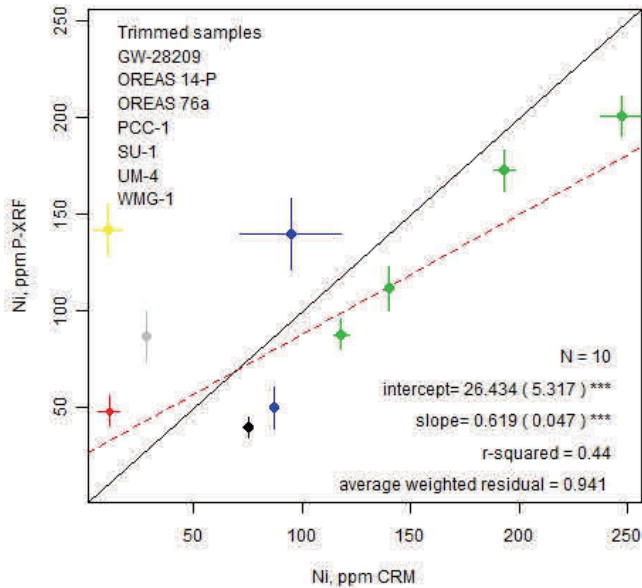
Handheld-Machine A-Mining Mode



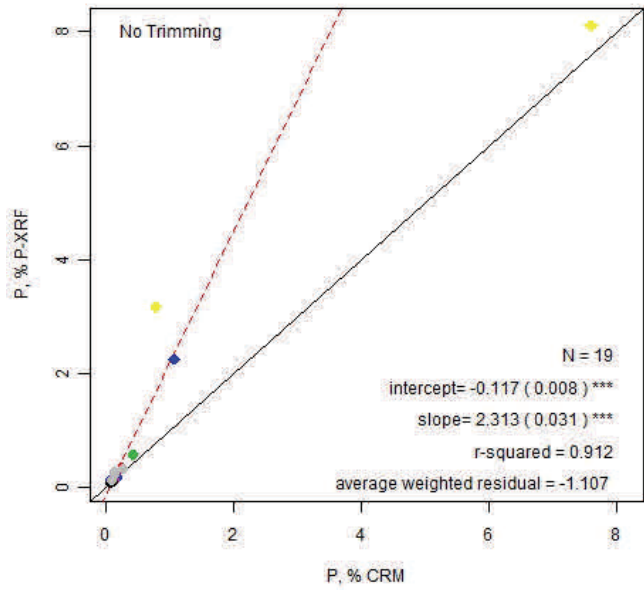
Handheld-HHBM-Mining Mode



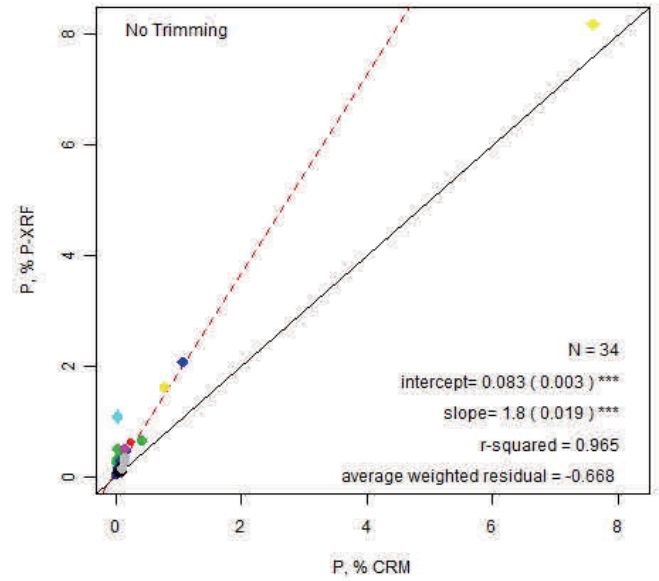
Handheld-HHCM-Mining Mode



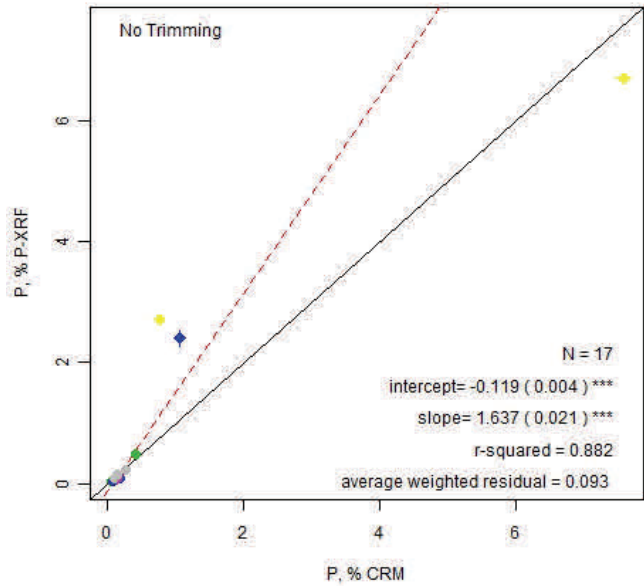
Benchtop-BTAM-Mining Mode



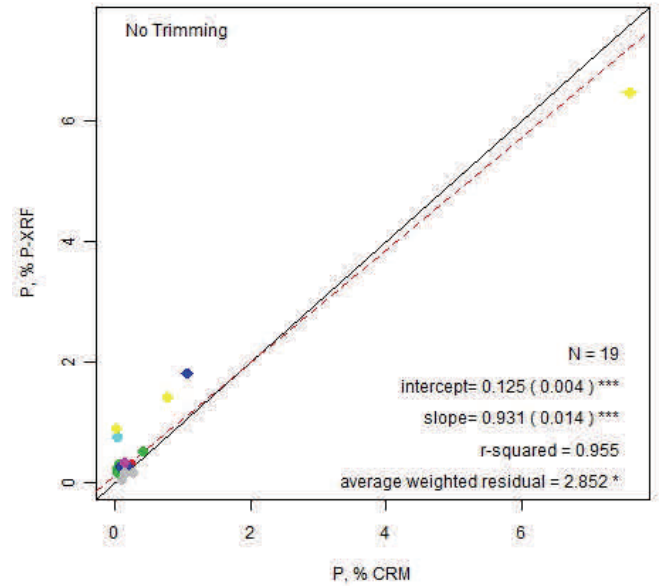
Bench Top-BTBM-Mining Mode



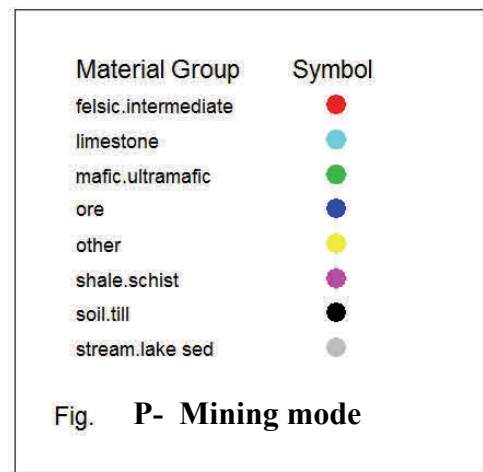
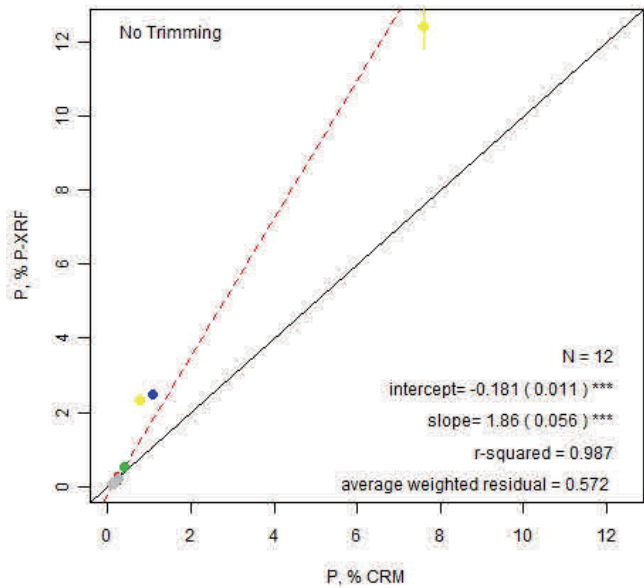
Handheld-HHAM-Mining Mode



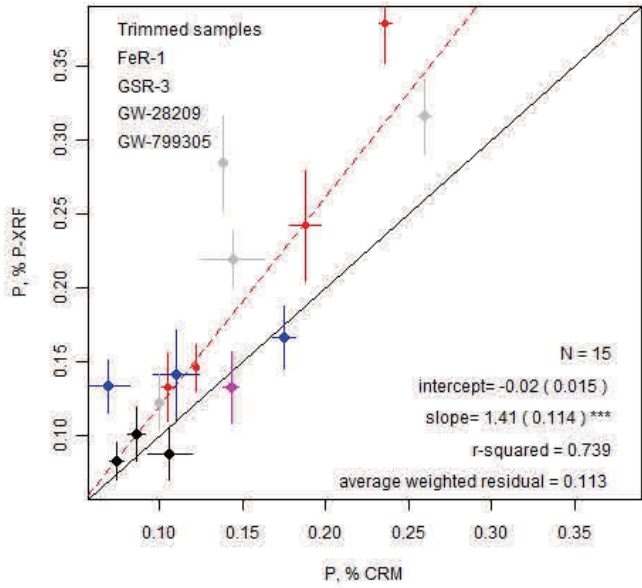
Handheld-HHBM-Mining Mode



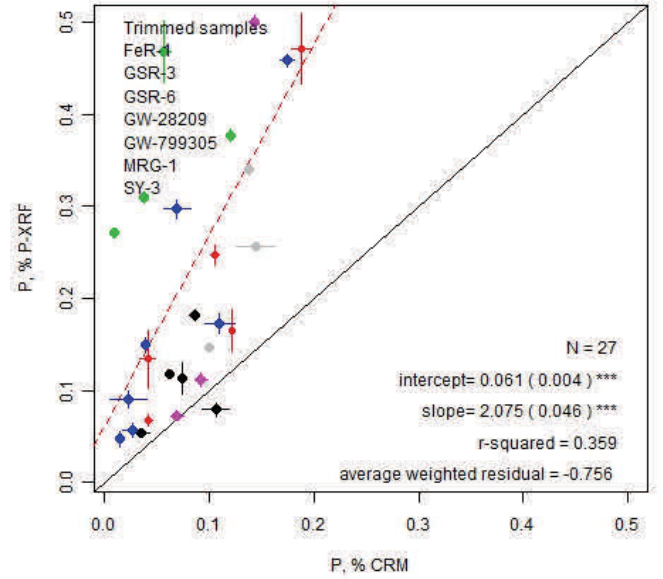
Handheld-HHCM-Mining Mode



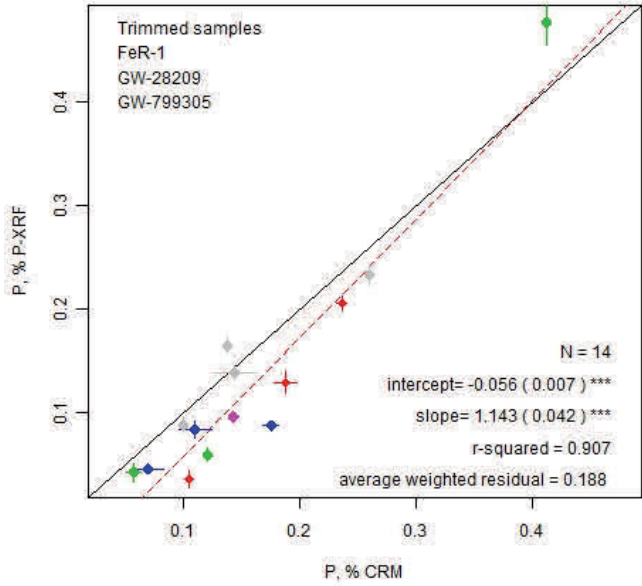
Benchtop-BTAM-Mining Mode



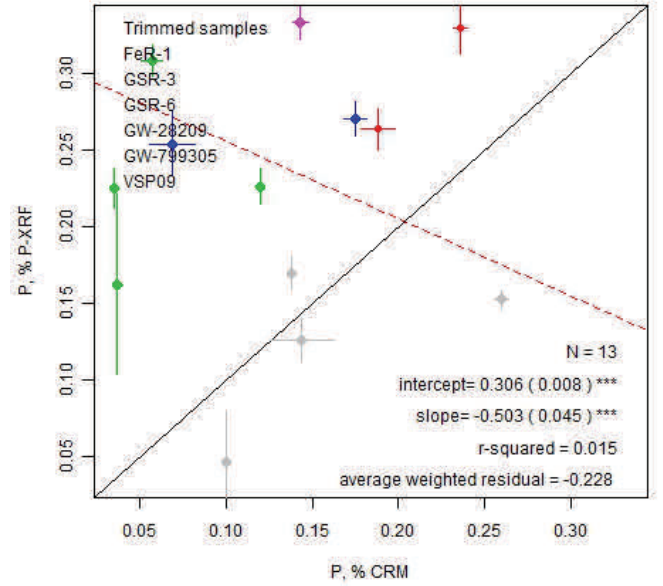
Bench Top-BTBM-Mining Mode



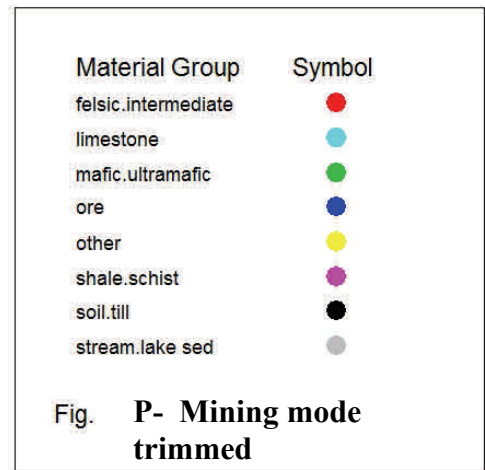
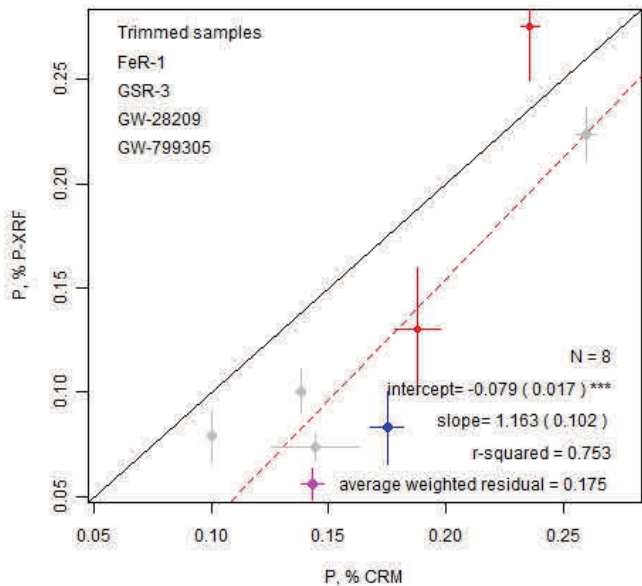
Handheld-HHAM-Mining Mode



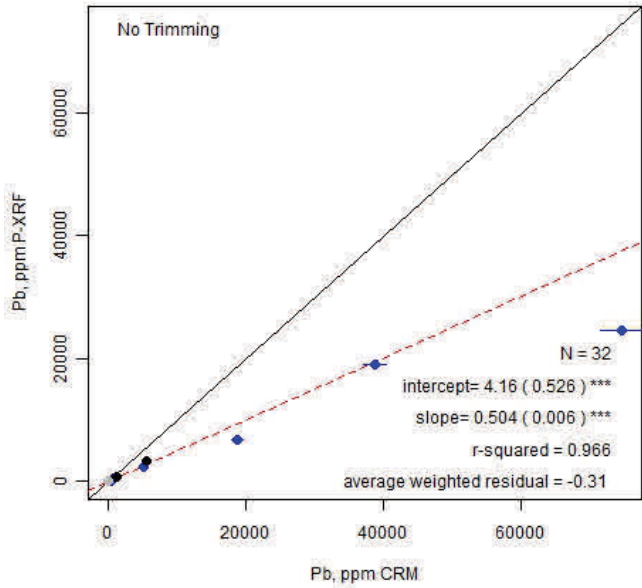
Handheld-HHBM-Mining Mode



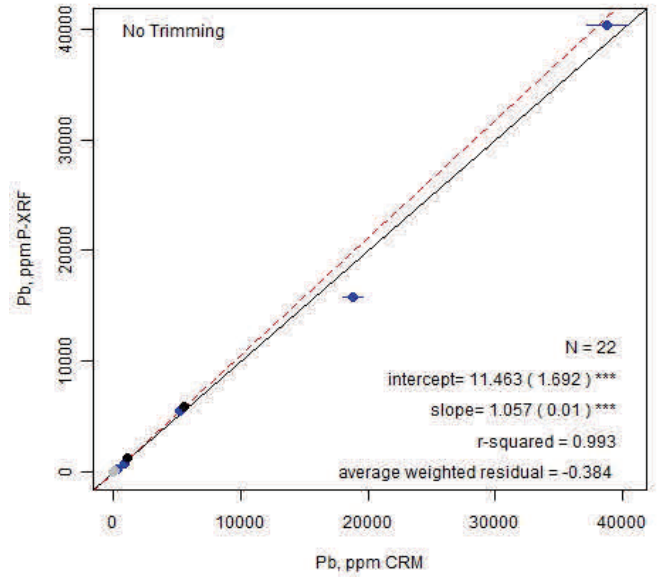
Handheld-HHCM-Mining Mode



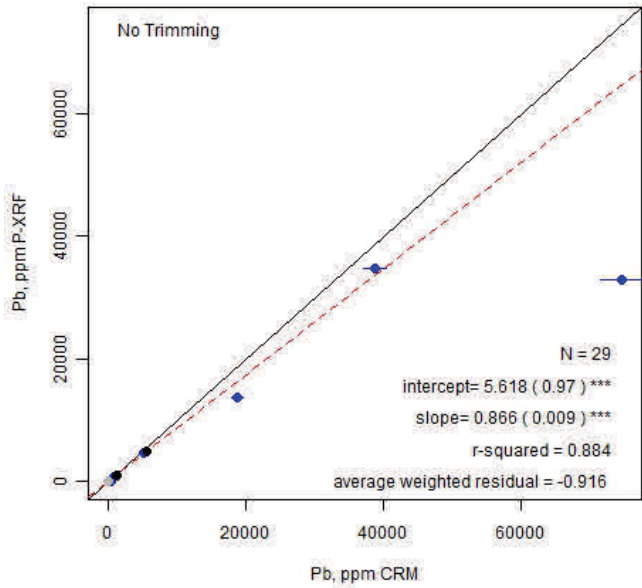
Benchtop-BTAM-Mining Mode



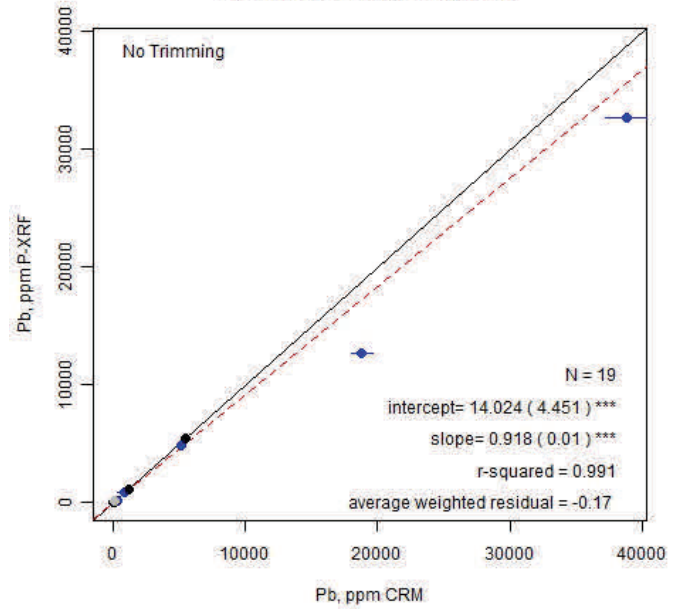
Bench Top-BTBM-Mining Mode



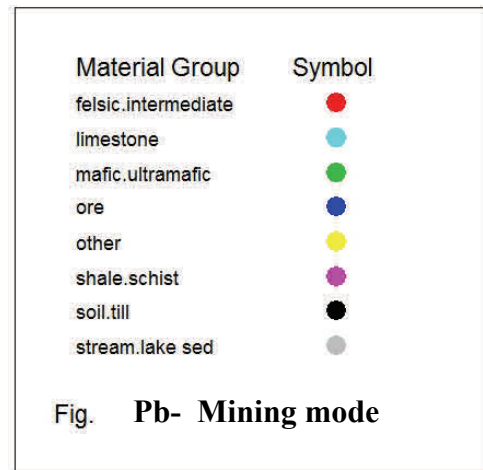
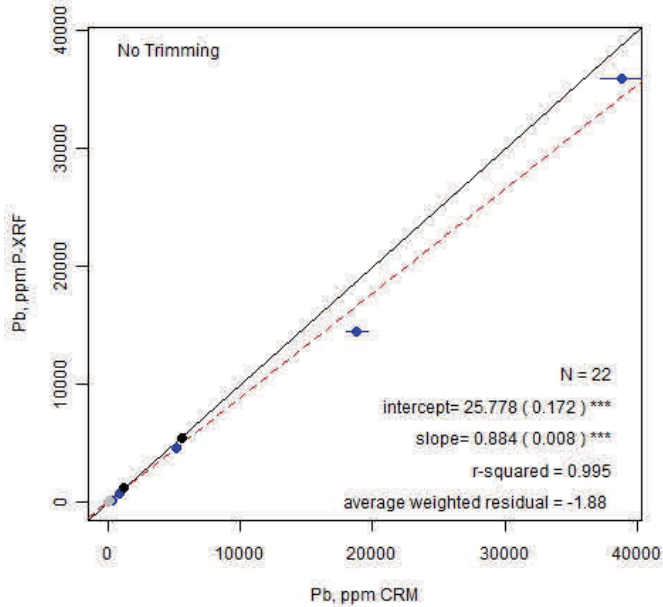
Handheld-HHAM-Mining Mode



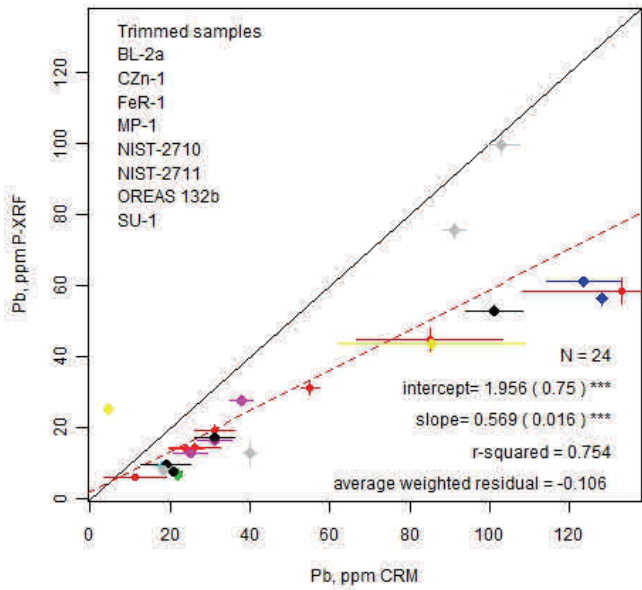
Handheld-HHBM-Mining Mode



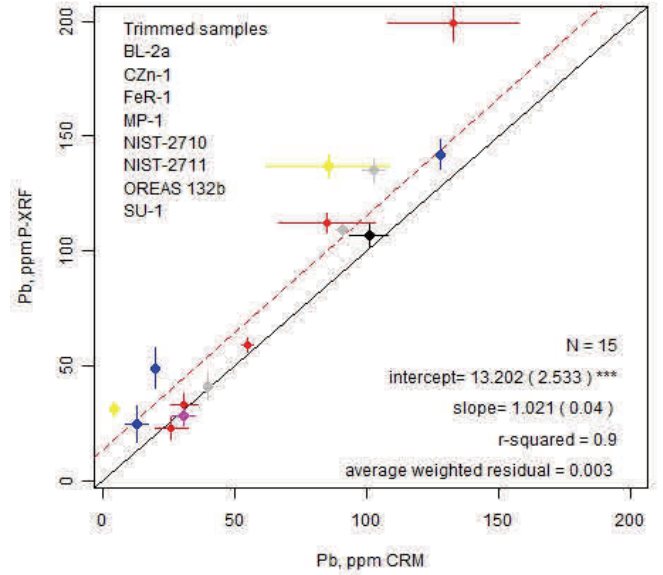
Handheld-HHCM-Mining Mode



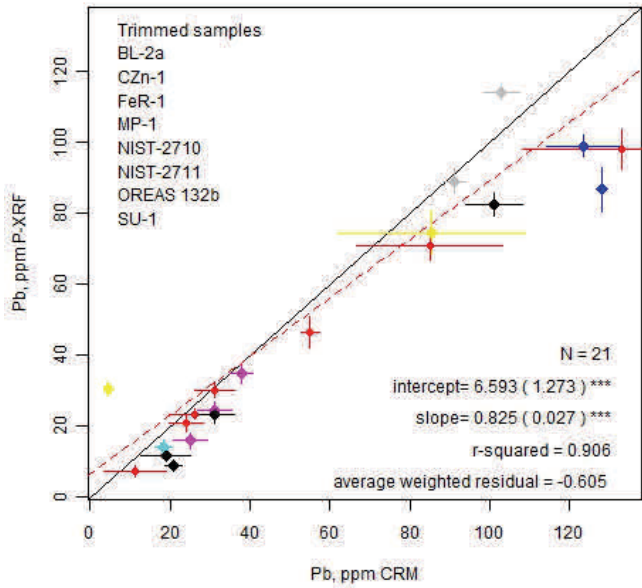
Benchtop-BTAM-Mining Mode



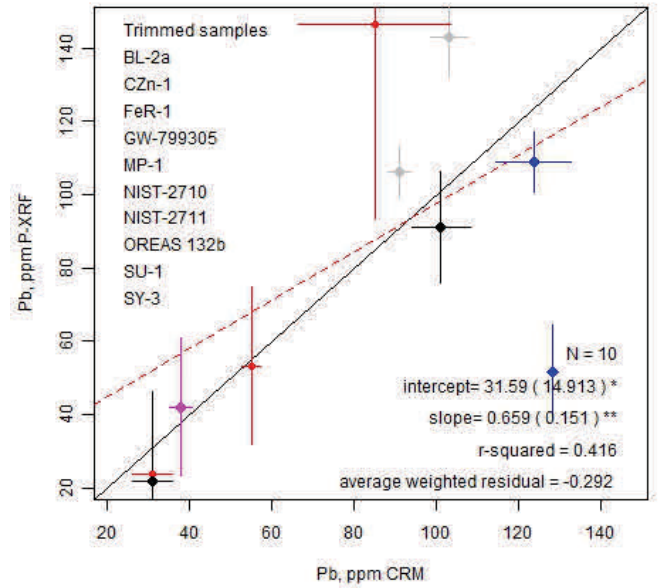
Bench Top-BTBM-Mining Mode



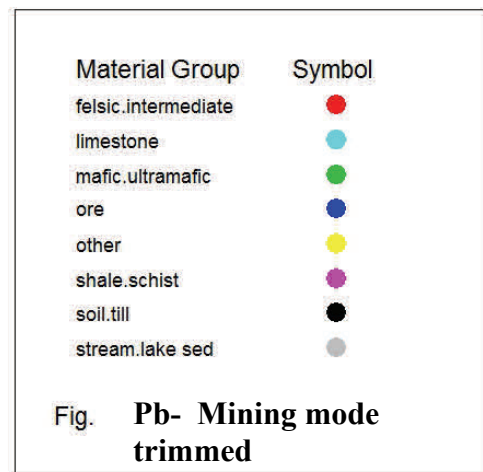
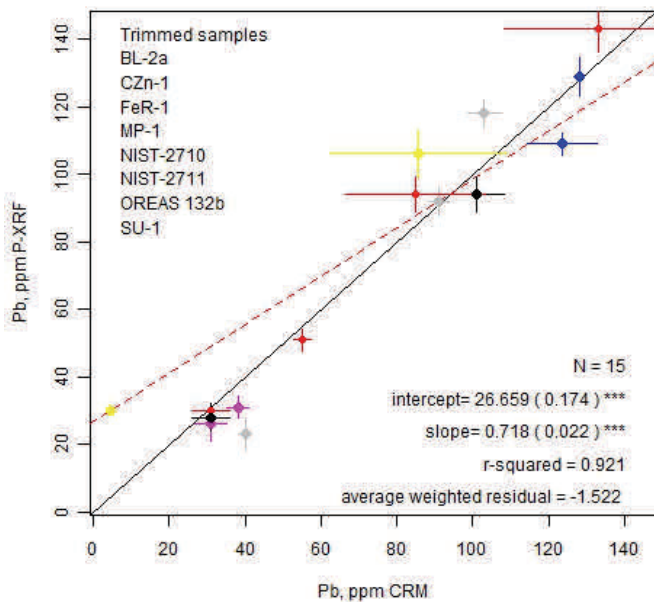
Handheld-HHAM-Mining Mode



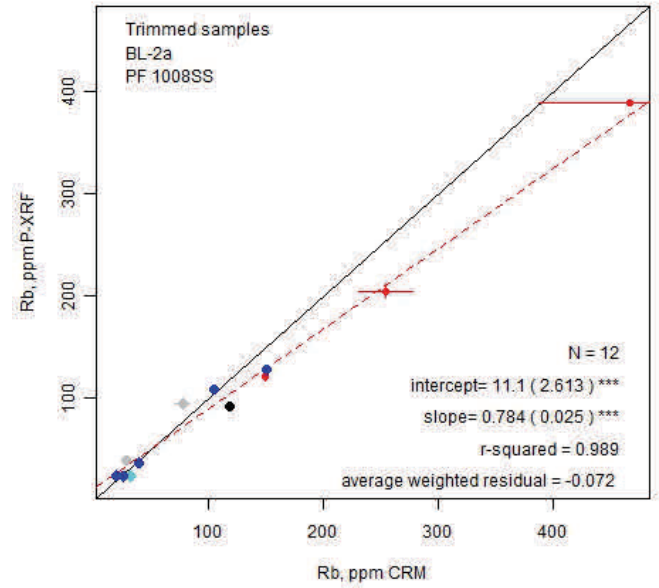
Handheld-HHBM-Mining Mode



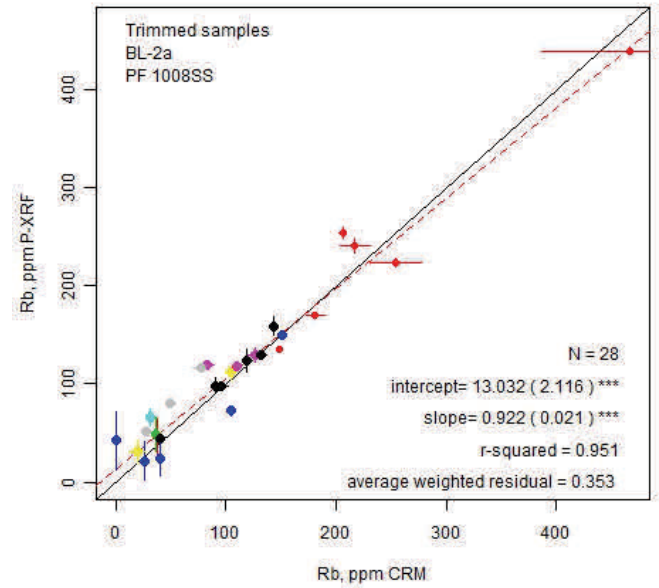
Handheld-HHCM-Mining Mode



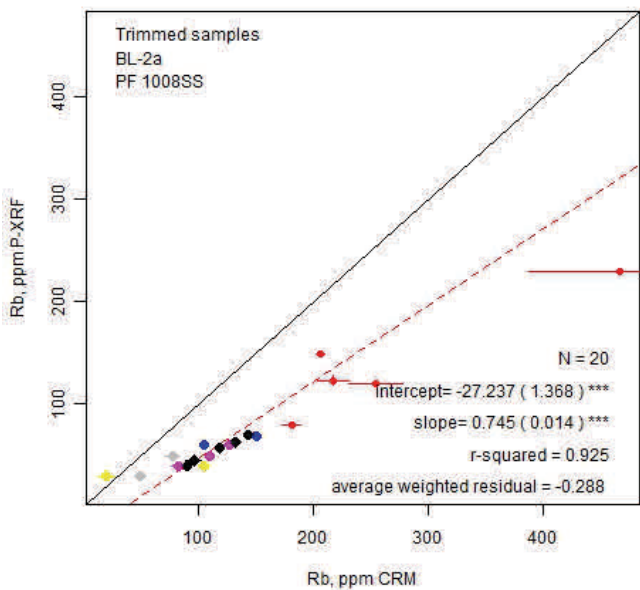
Bench Top-BTBM-Mining Mode



Handheld-HHBM-Mining Mode



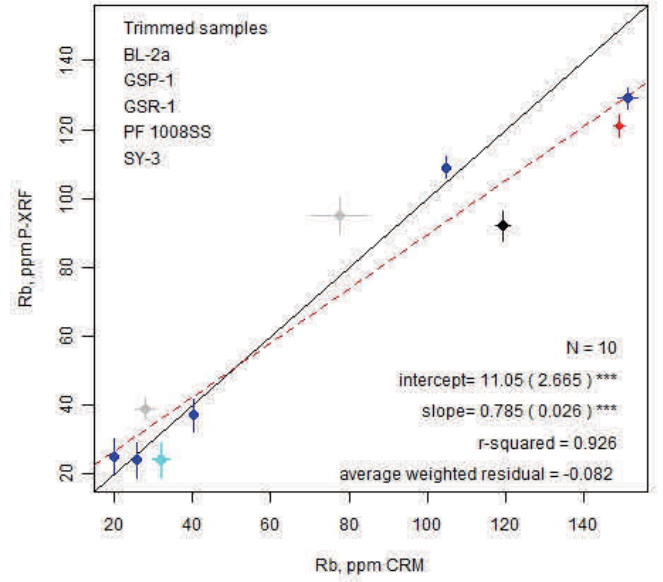
Handheld-HHCM-Mining Mode



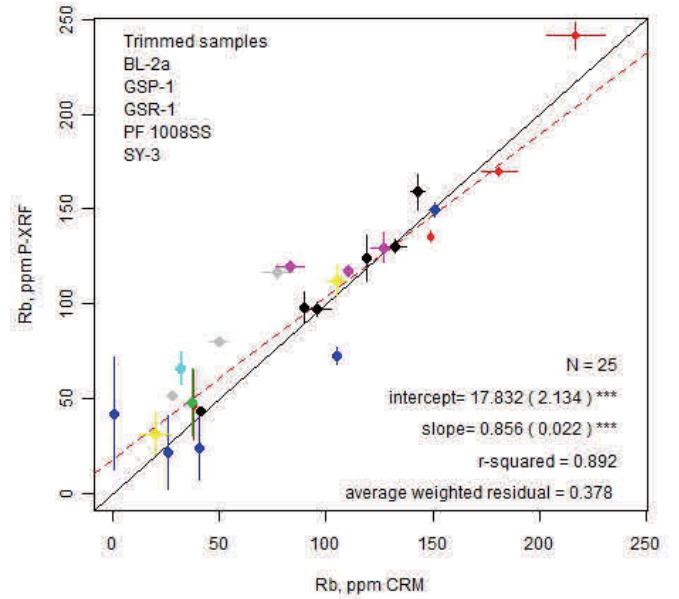
Material Group	Symbol
felsic.intermediate	●
limestone	●
mafic.ultramafic	●
ore	●
other	●
shale.schist	●
soil.till	●
stream.lake sed	●

Fig. **Rb- Mining mode**
Partial trim

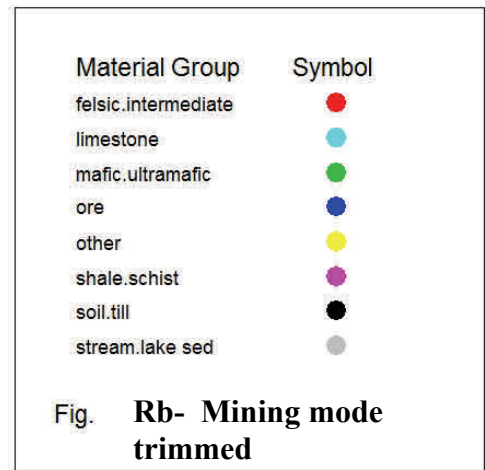
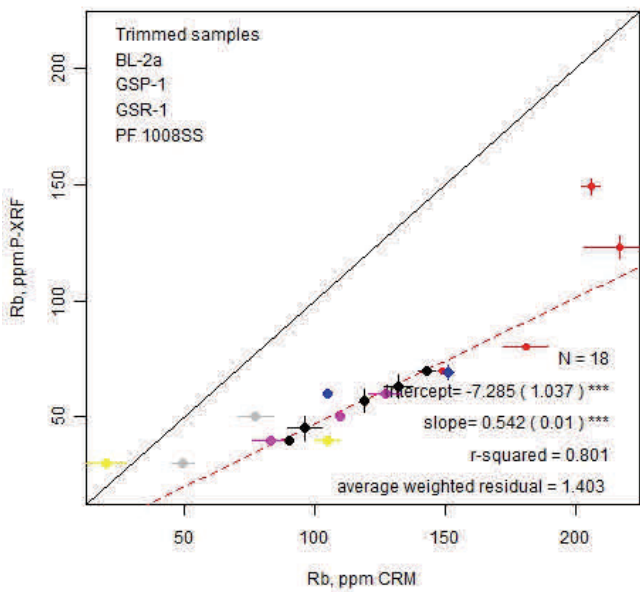
Bench Top-BTBM-Mining Mode



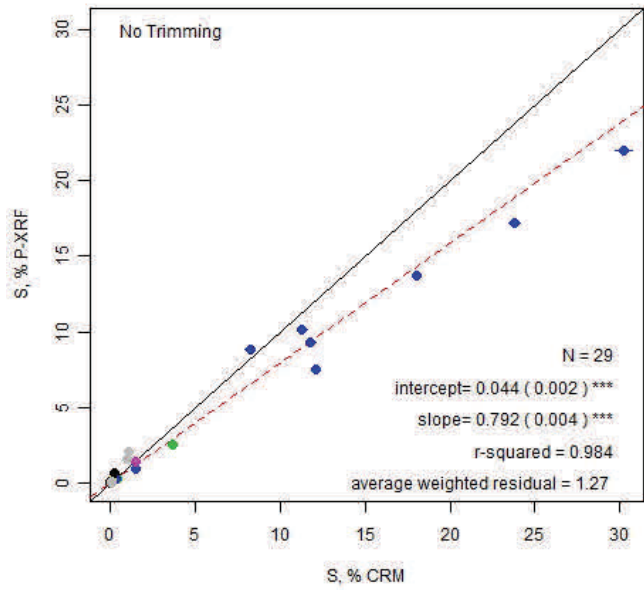
Handheld-HHBM-Mining Mode



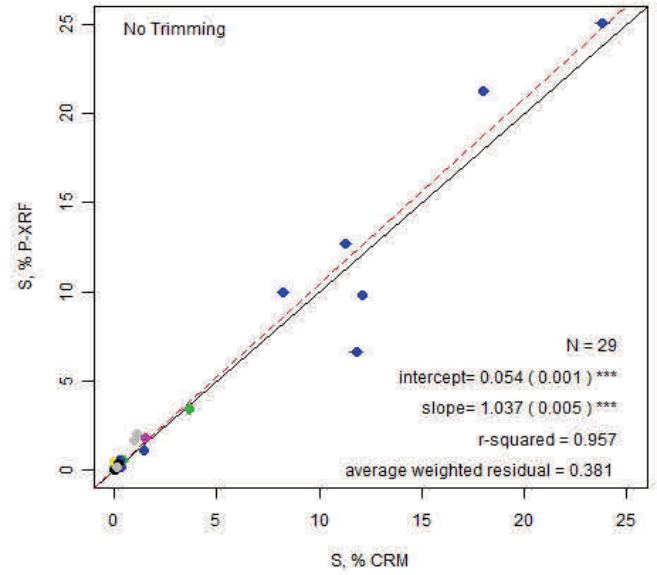
Handheld-HHCM-Mining Mode



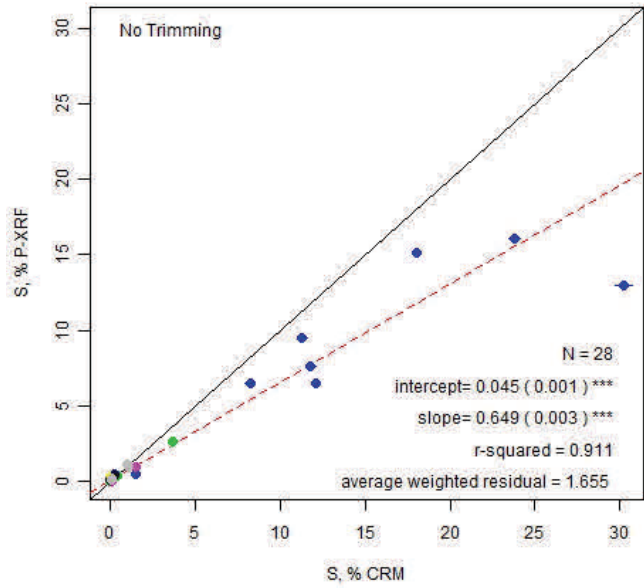
Benchtop-BTAM-Mining Mode



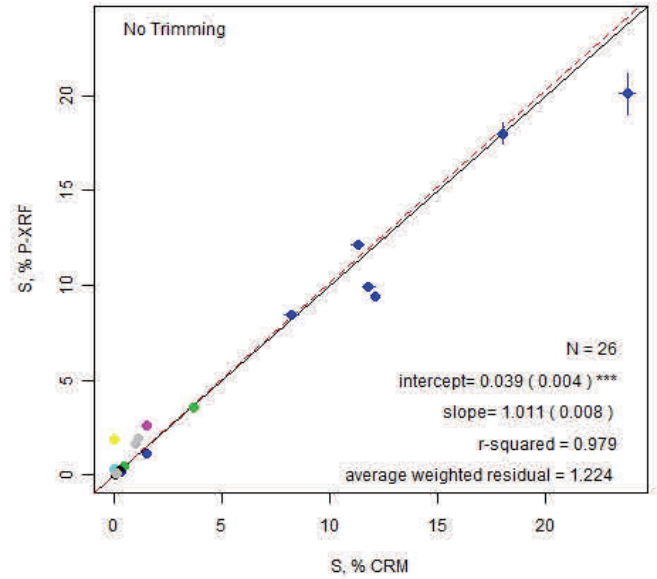
Bench Top-BTBM-Mining Mode



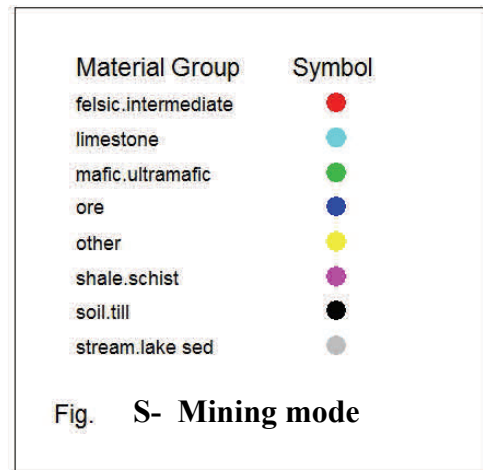
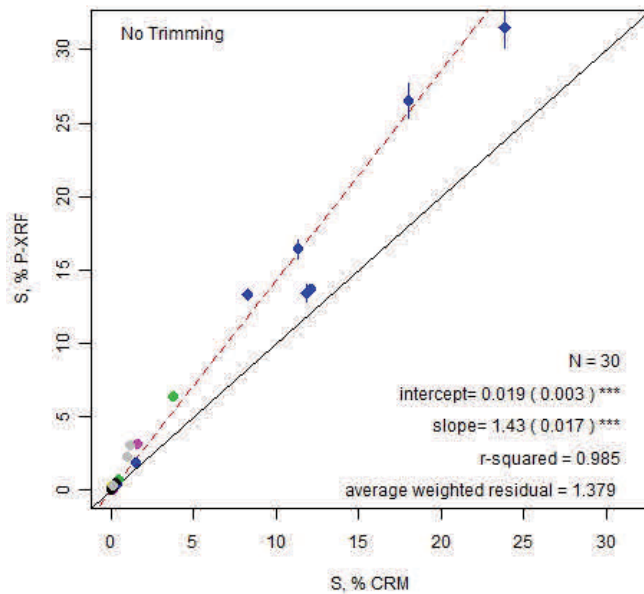
Handheld-HHAM-Mining Mode



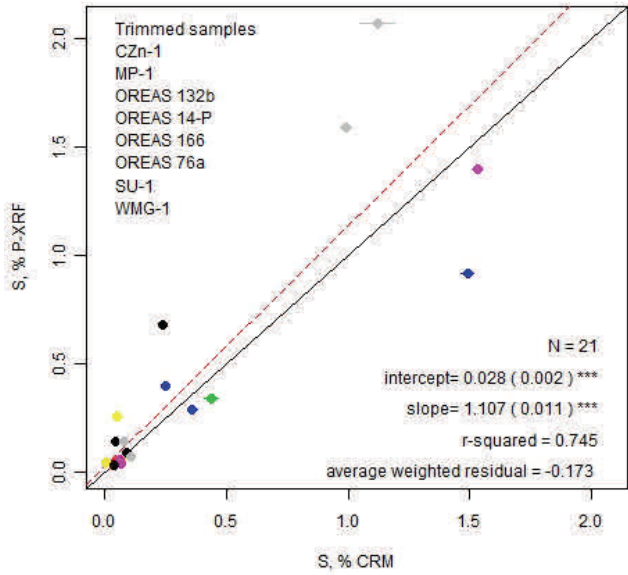
Handheld-HHBM-Mining Mode



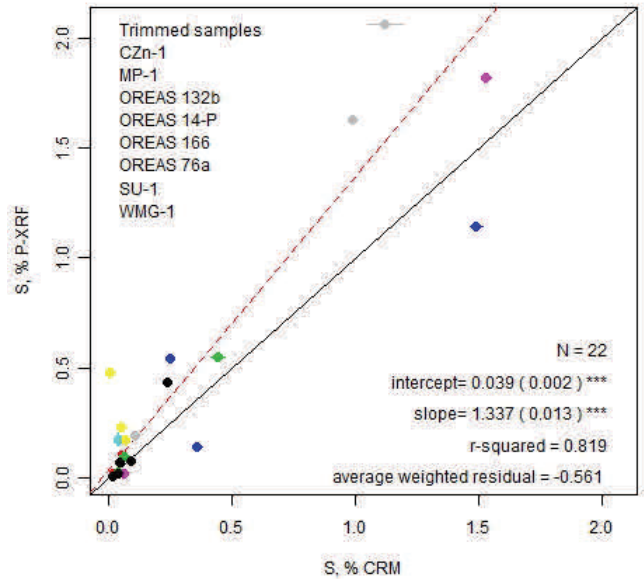
Handheld-HHCM-Mining Mode



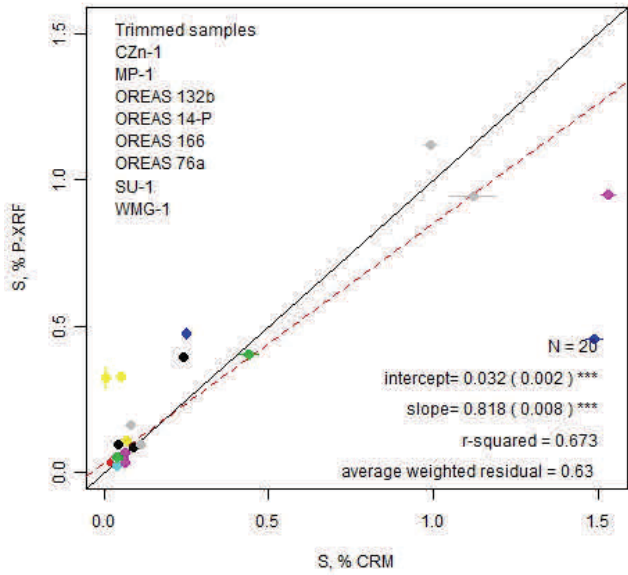
Benchtop-BTAM-Mining Mode



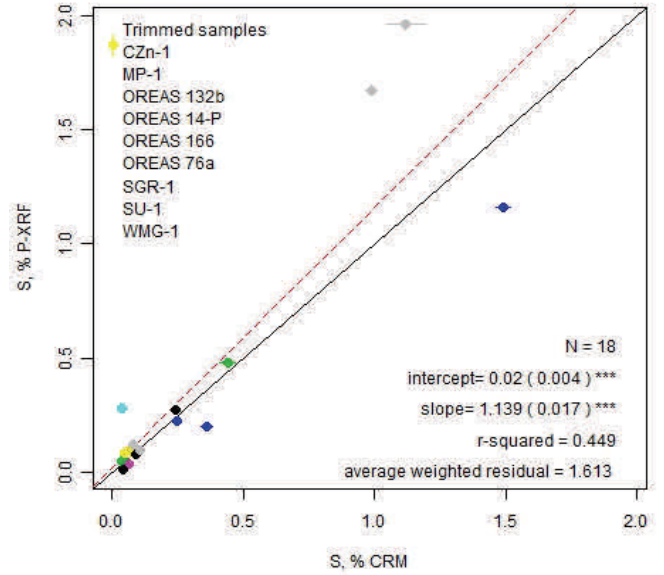
Bench Top-BTBM-Mining Mode



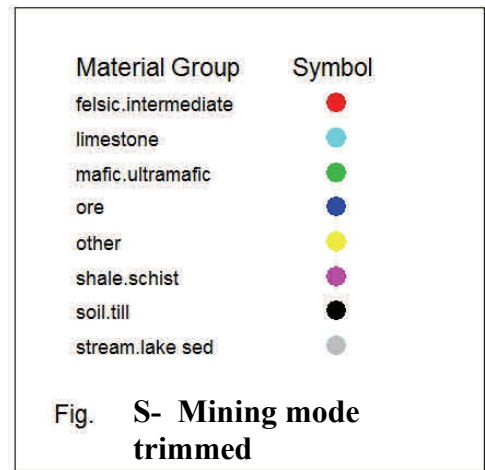
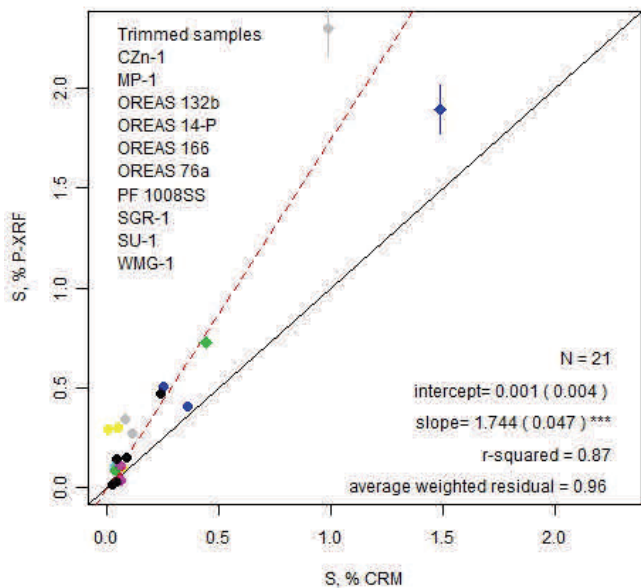
Handheld-HHAM-Mining Mode

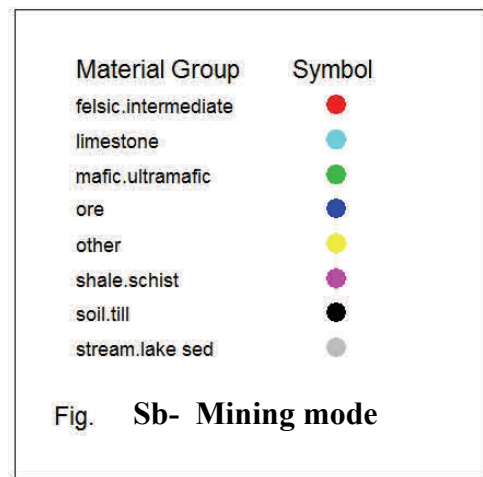
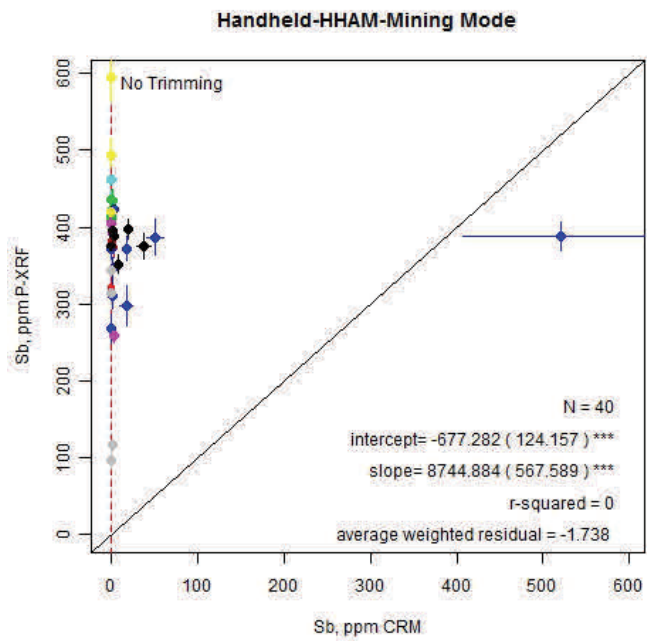


Handheld-HHBM-Mining Mode

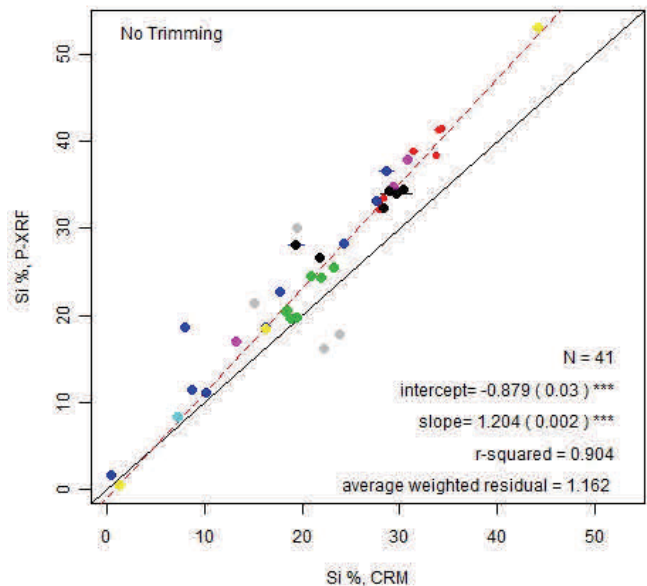


Handheld-HHCM-Mining Mode

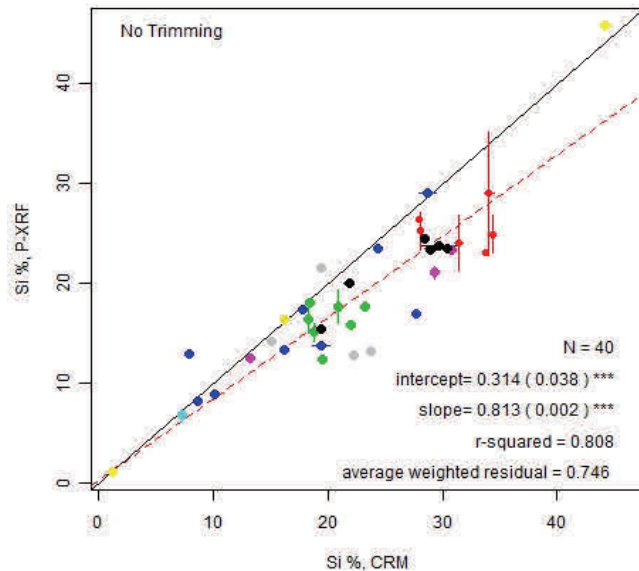




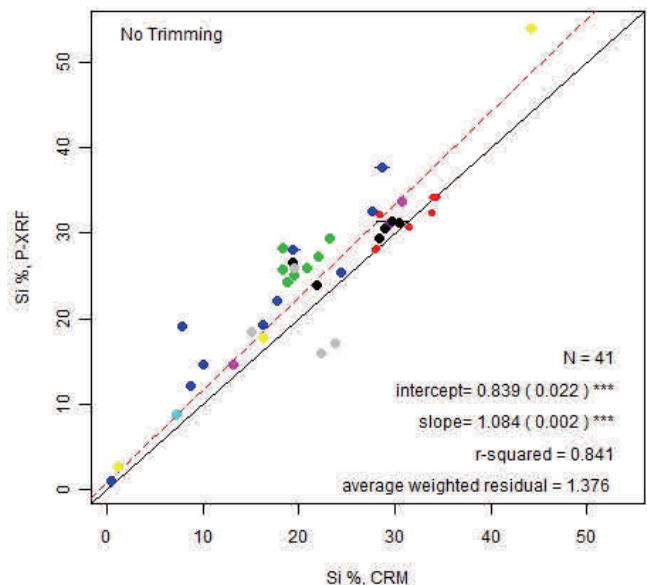
Benchtop-BTAM-Mining Mode



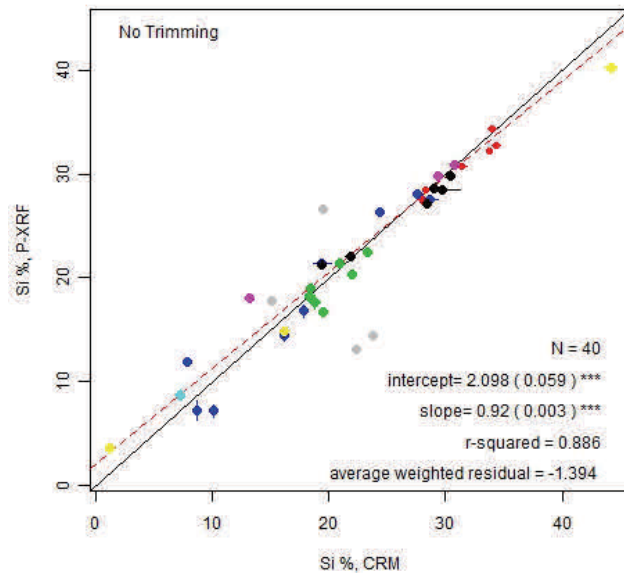
Bench Top-BTBM-Mining Mode



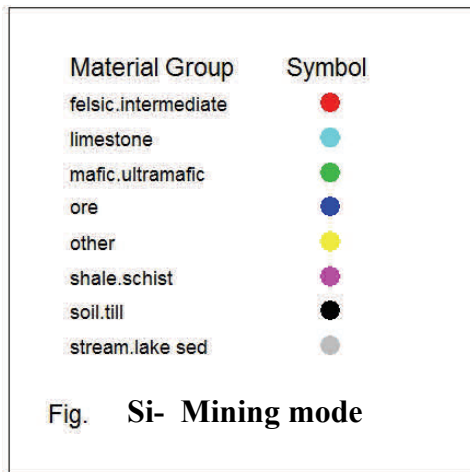
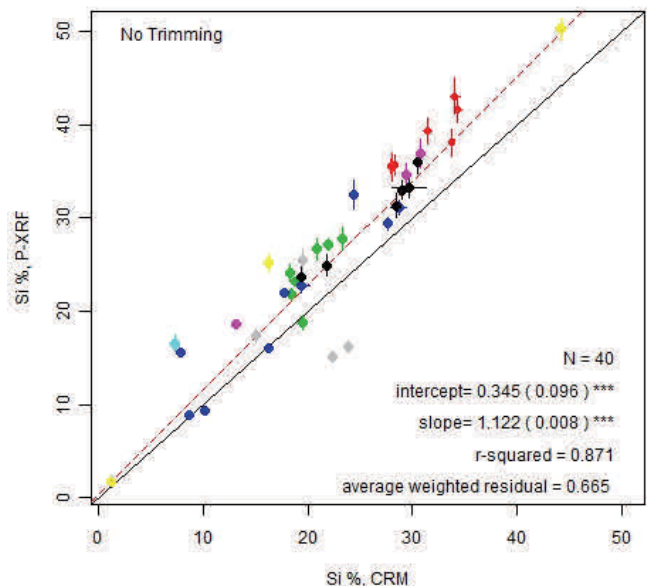
Handheld-HHAM-Mining Mode



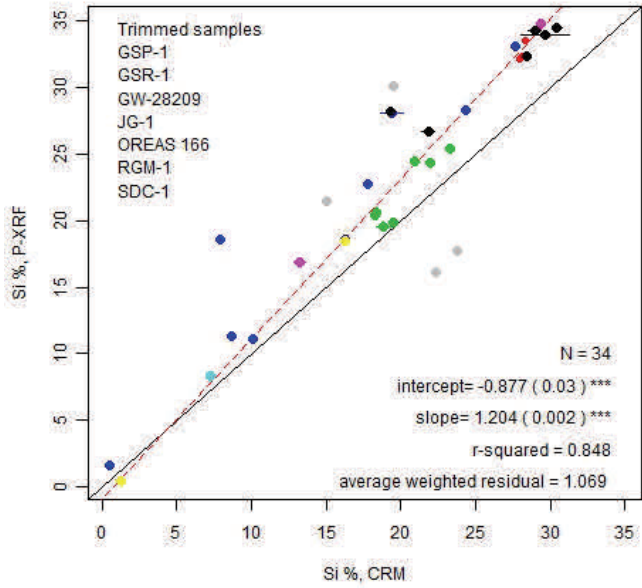
Handheld-HHBM-Mining Mode



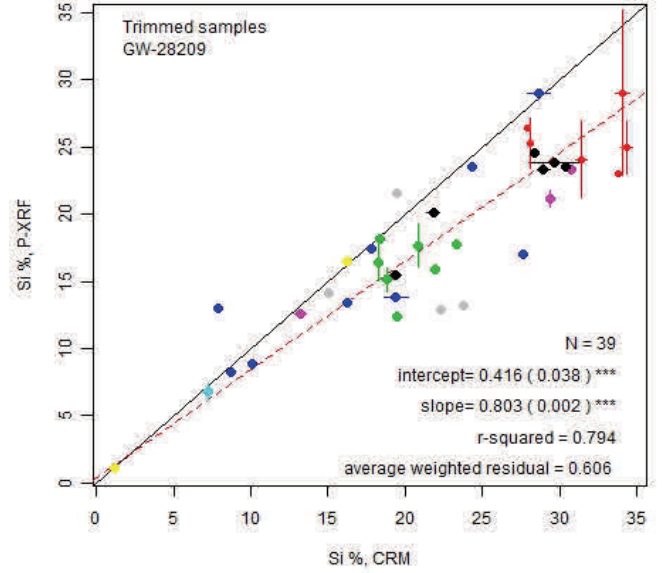
Handheld-HHCM-Mining Mode



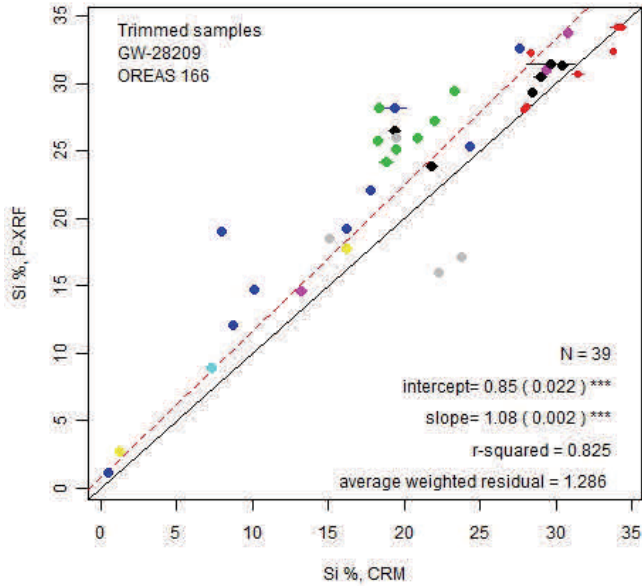
Benchtop-BTAM-Mining Mode



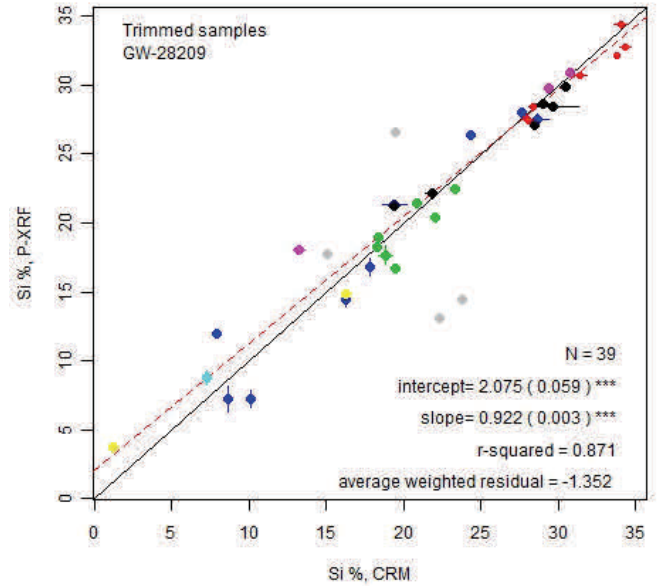
Bench Top-BTBM-Mining Mode



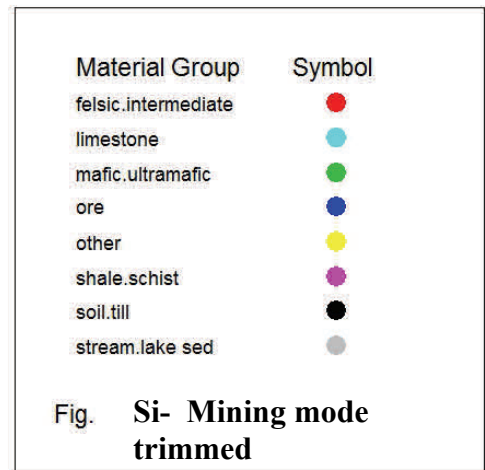
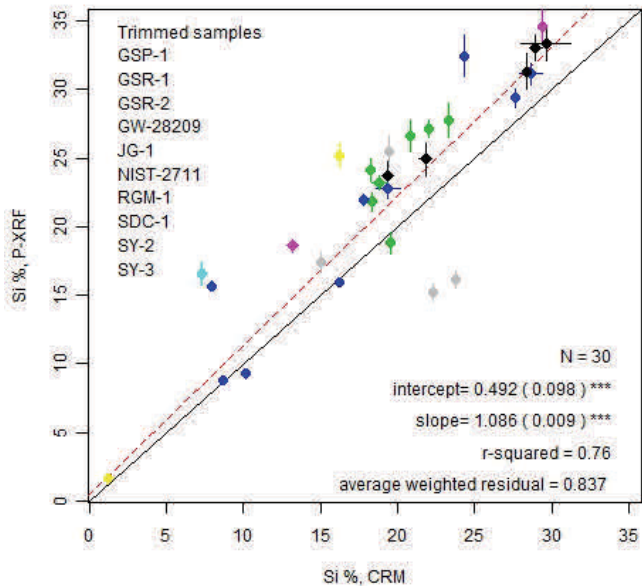
Handheld-HHAM-Mining Mode

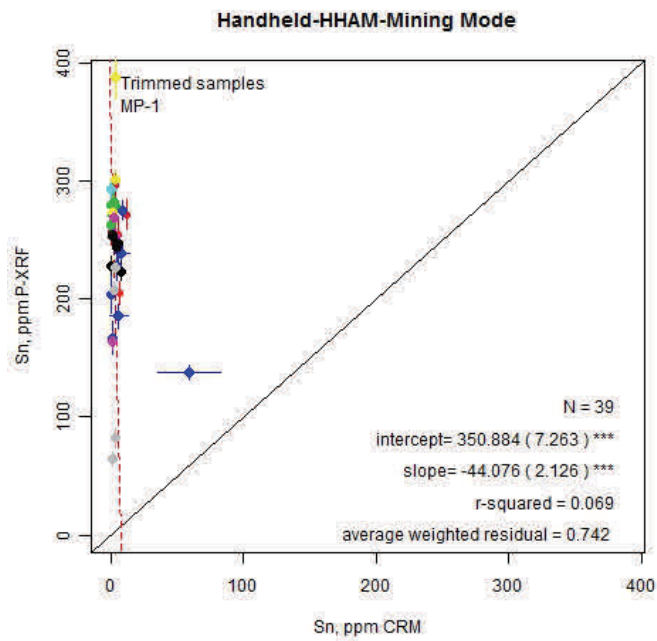


Handheld-HHBM-Mining Mode



Handheld-HHCM-Mining Mode

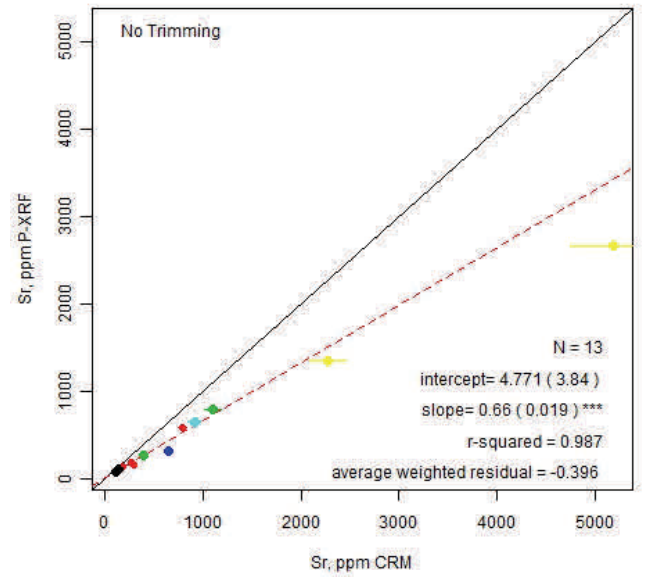




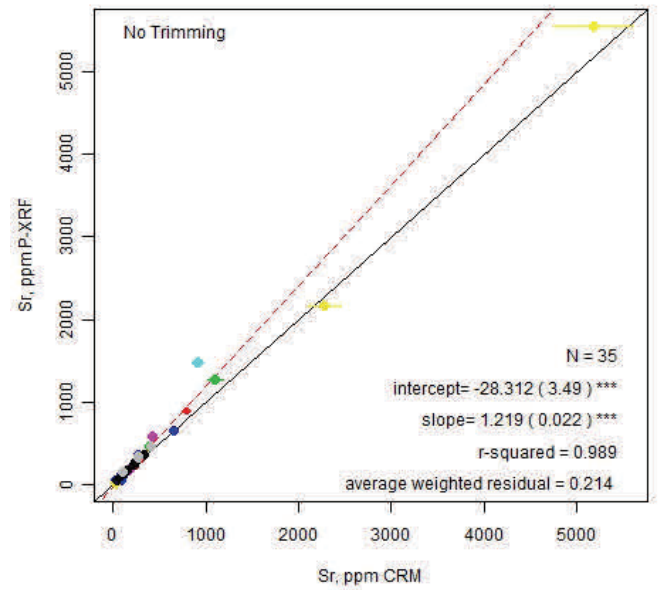
Material Group	Symbol
felsic.intermediate	●
limestone	●
mafic.ultramafic	●
ore	●
other	●
shale.schist	●
soil.till	●
stream.lake sed	●

Fig. Sn- Mining mode

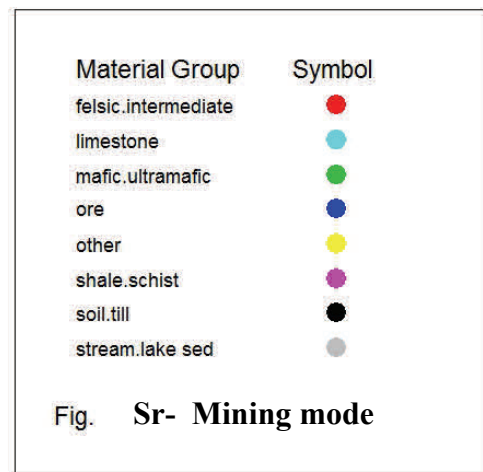
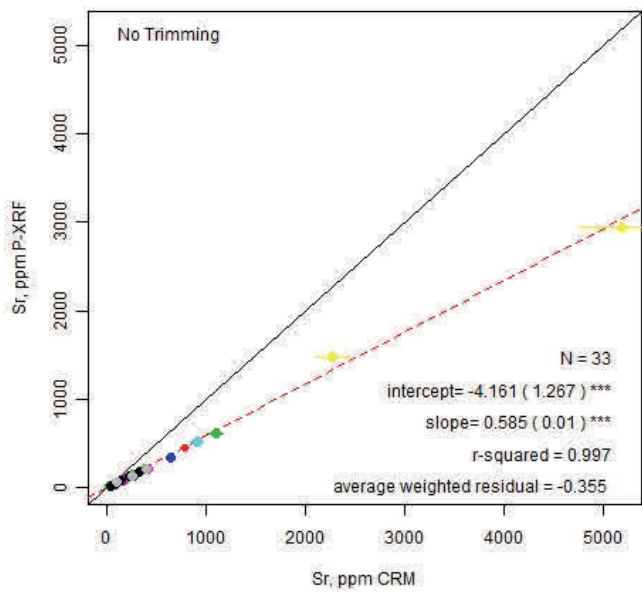
Bench Top-BTBM-Mining Mode



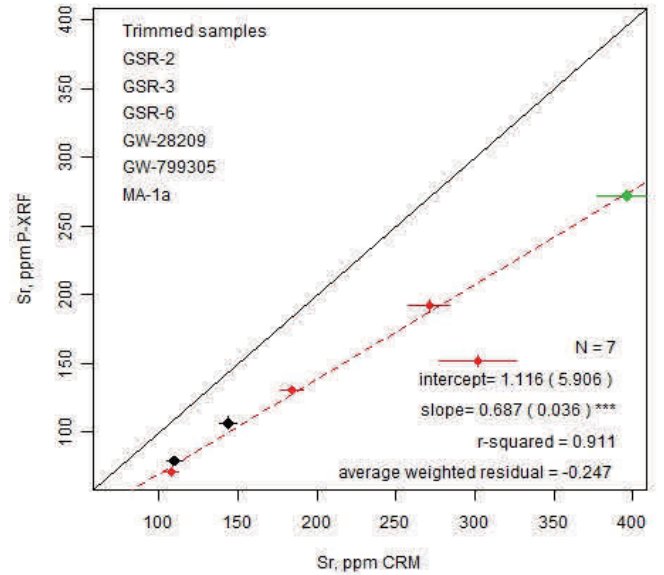
Handheld-HHBM-Mining Mode



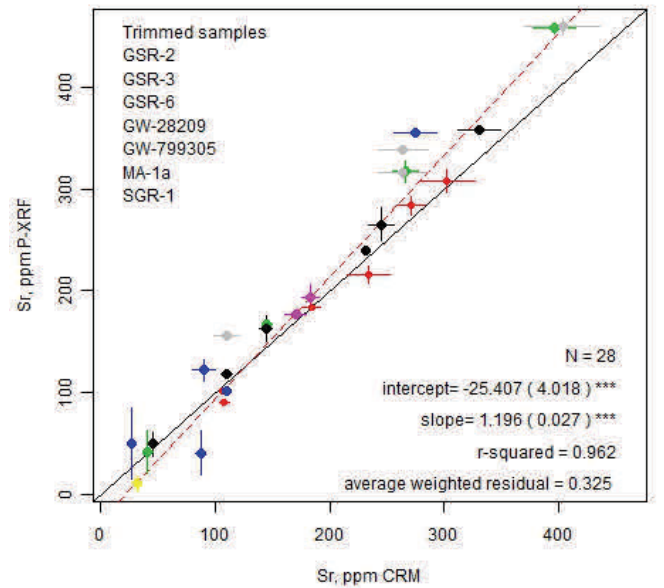
Handheld-HHCM-Mining Mode



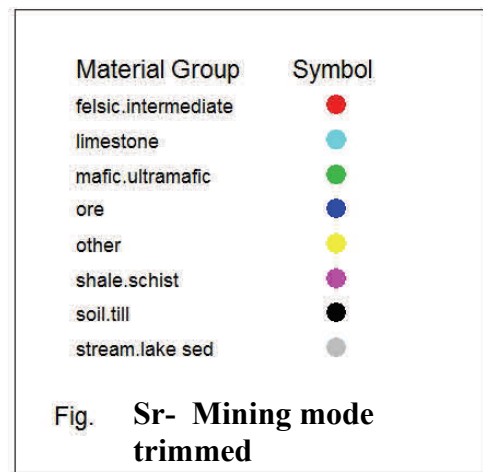
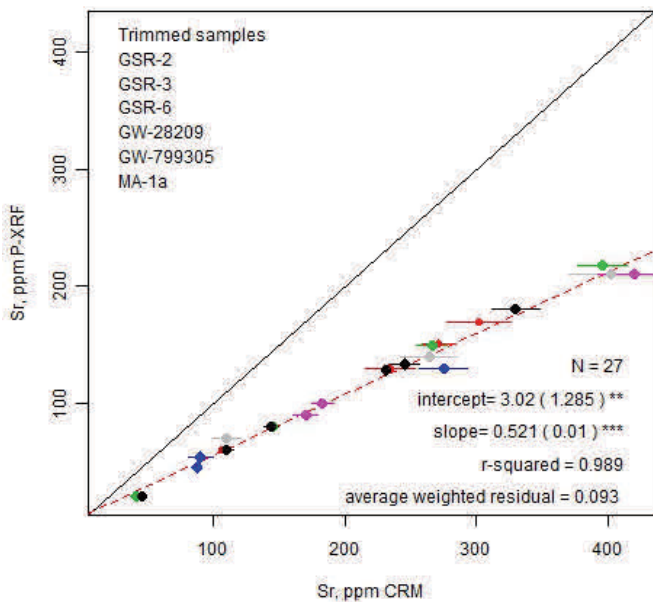
Bench Top-BTBM-Mining Mode

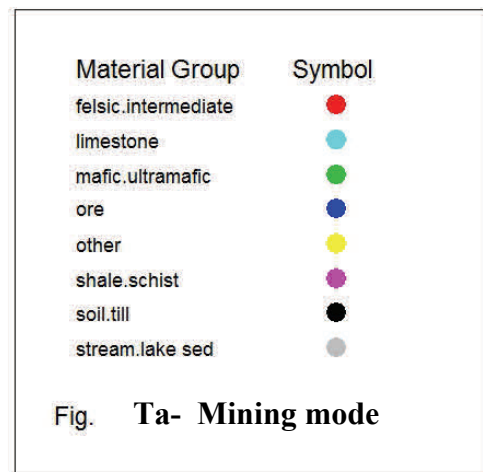
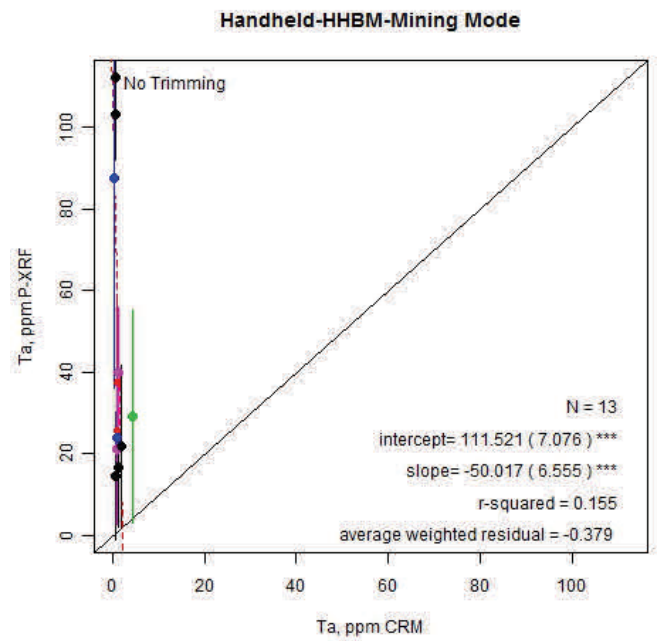


Handheld-HHBM-Mining Mode

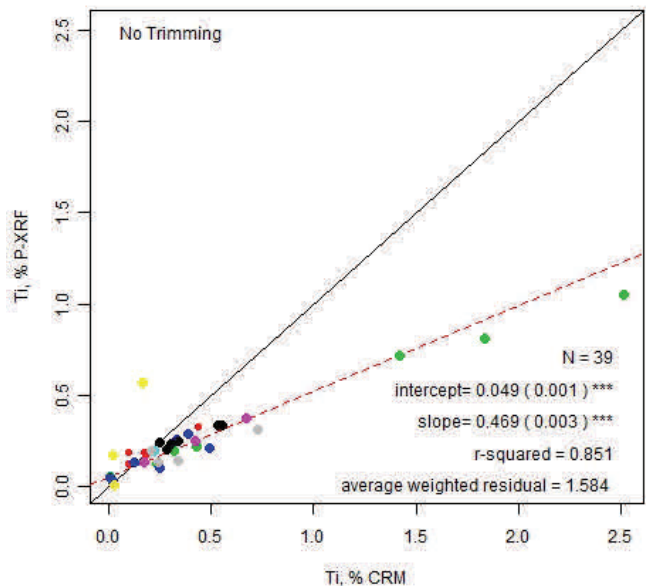


Handheld-HHCM-Mining Mode

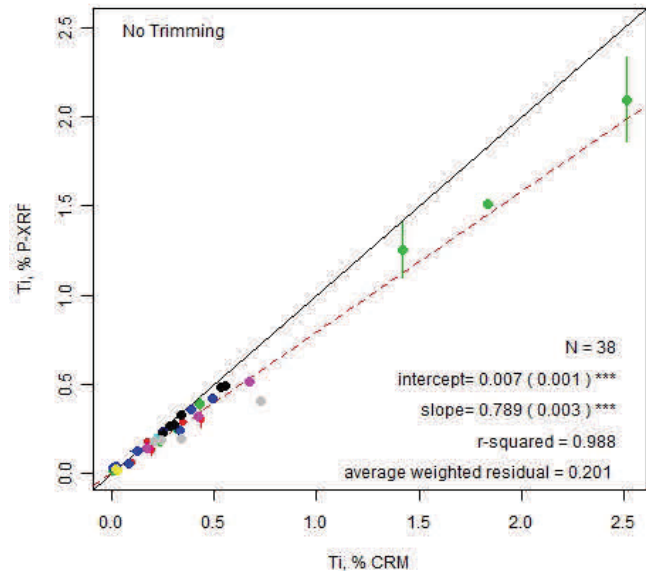




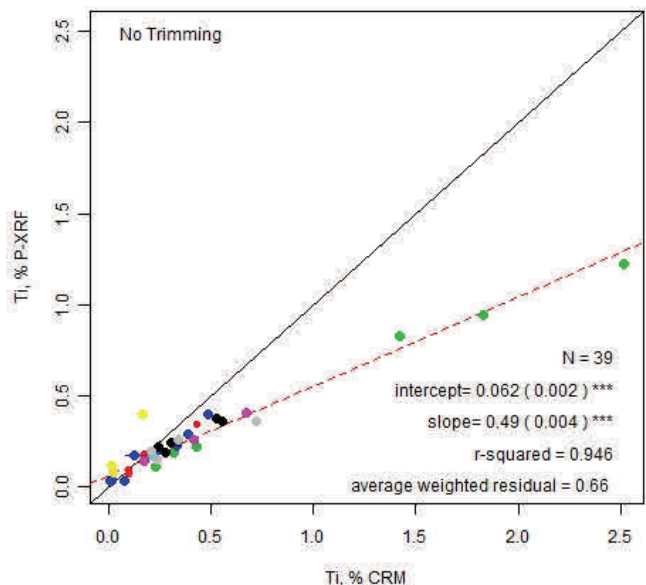
Benchtop-BTAM-Mining Mode



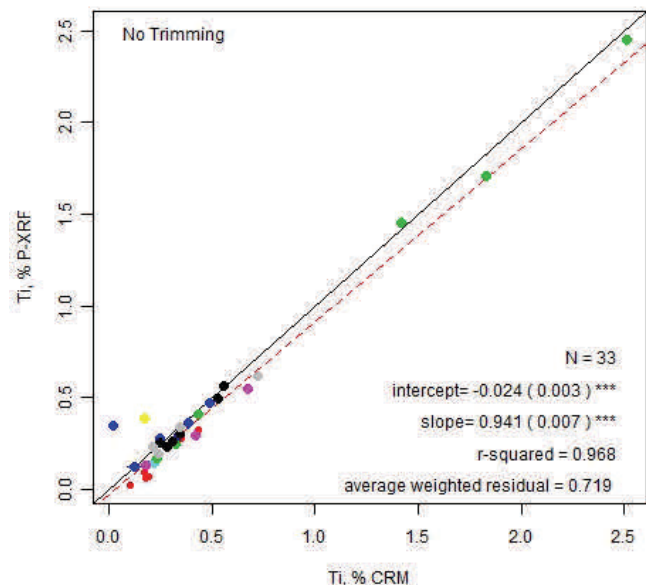
Bench Top-BTBM-Mining Mode



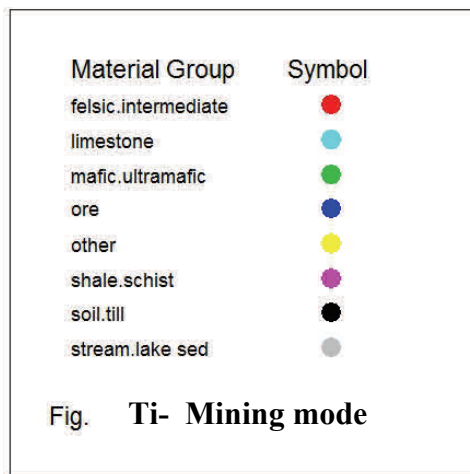
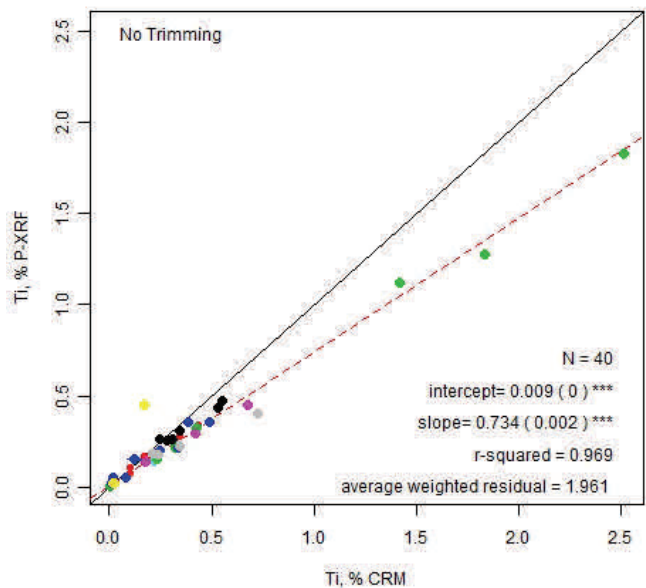
Handheld-HHAM-Mining Mode



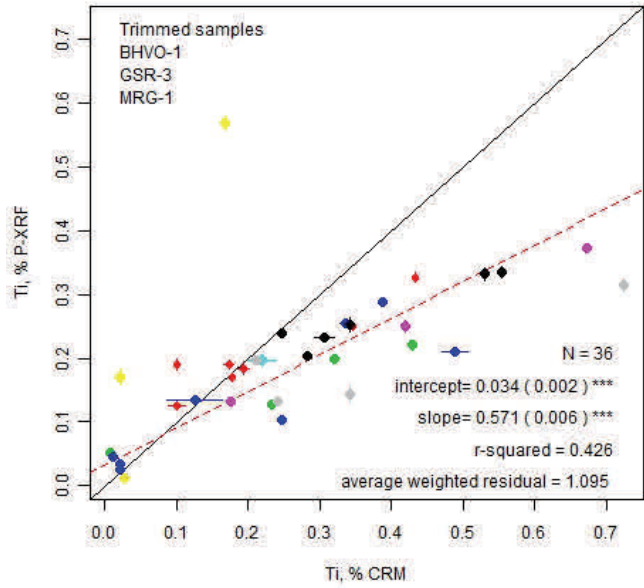
Handheld-HHBM-Mining Mode



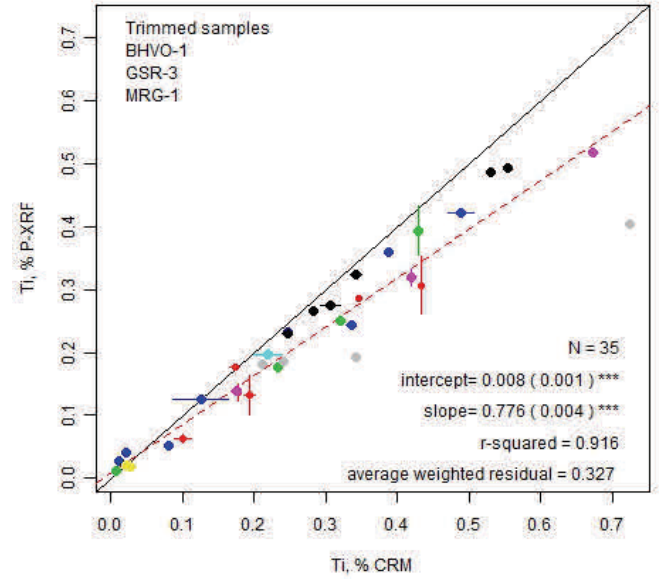
Handheld-HHCM-Mining Mode



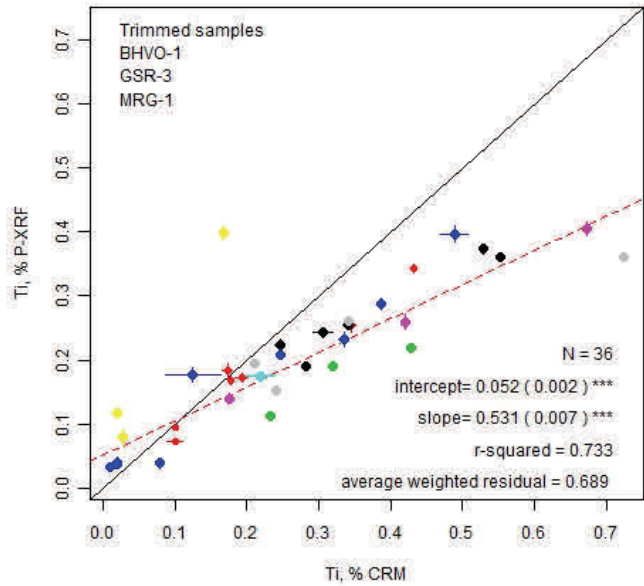
Benchtop-BTAM-Mining Mode



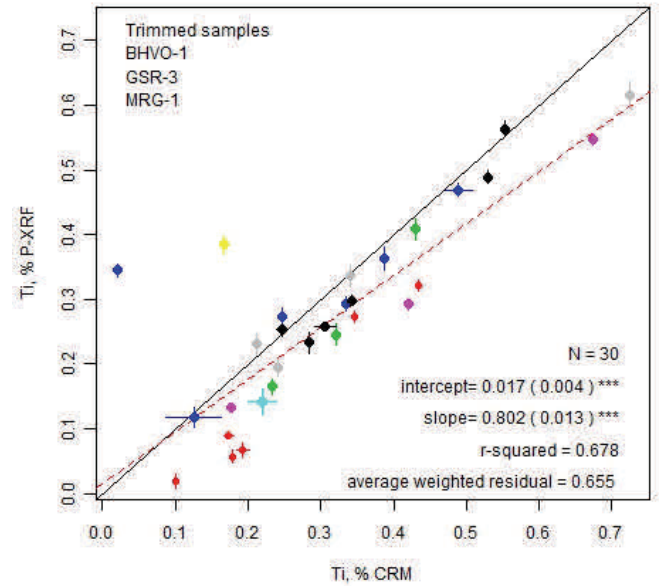
Bench Top-BTBM-Mining Mode



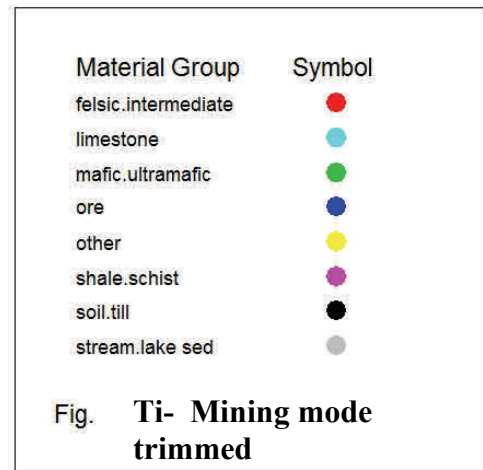
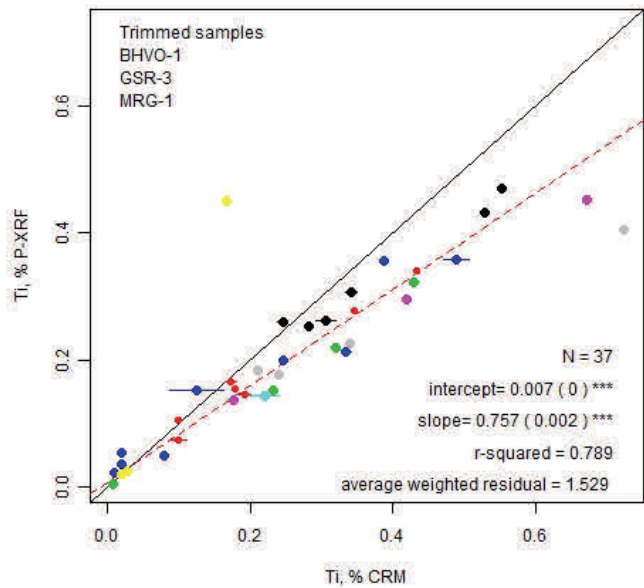
Handheld-HHAM-Mining Mode



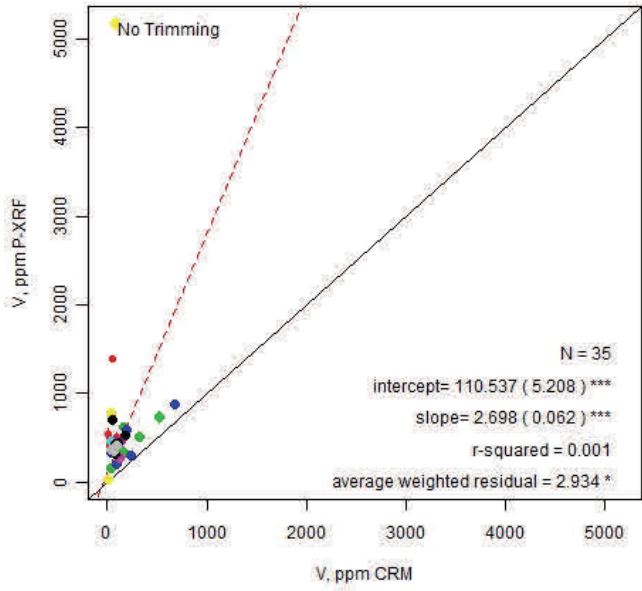
Handheld-HHBM-Mining Mode



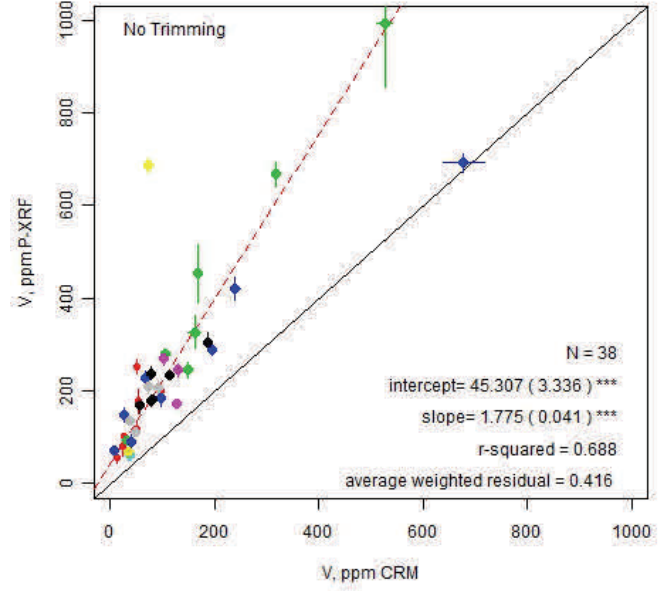
Handheld-HHCM-Mining Mode



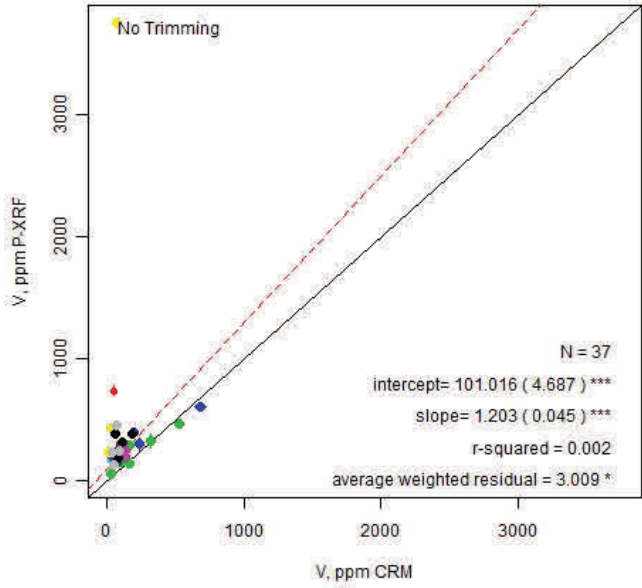
Benchtop-BTAM-Mining Mode



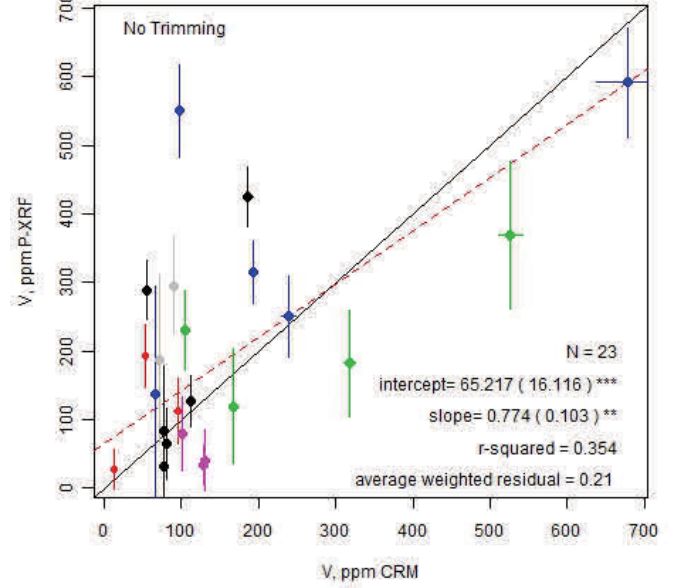
Bench Top-BTBM-Mining Mode



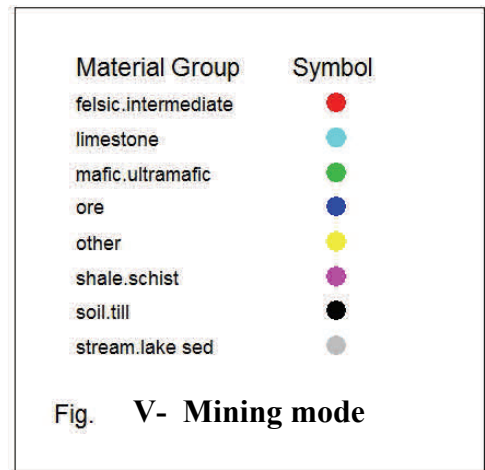
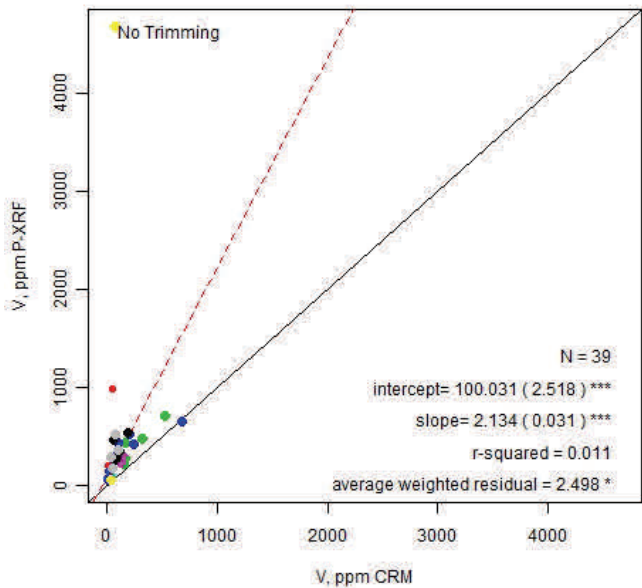
Handheld-HHAM-Mining Mode



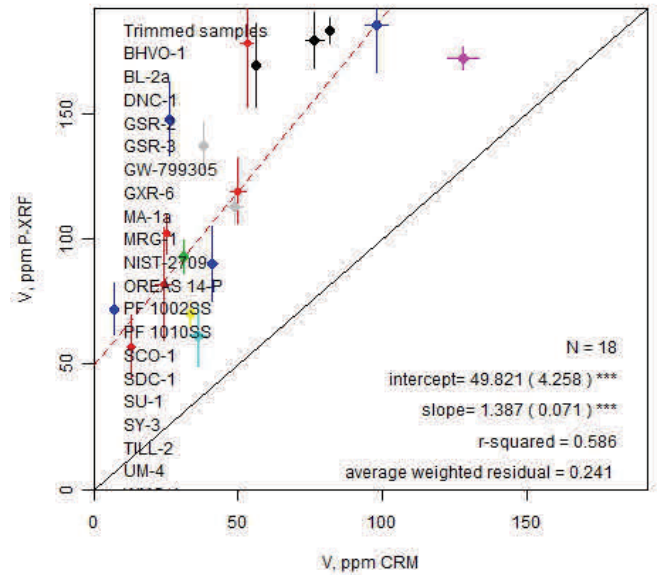
Handheld-HHBM-Mining Mode



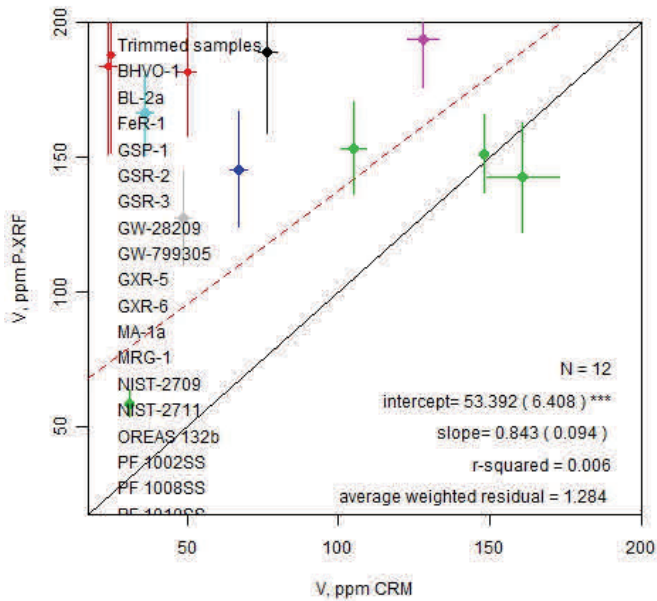
Handheld-HHCM-Mining Mode



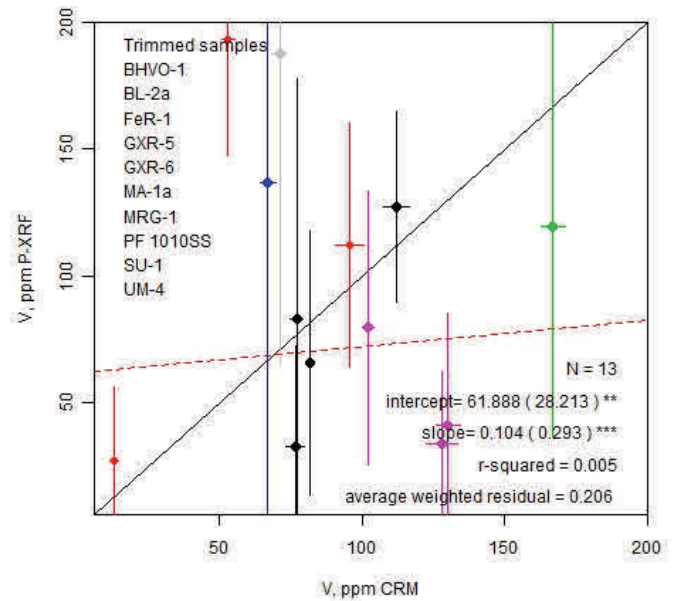
Bench Top-BTBM-Mining Mode



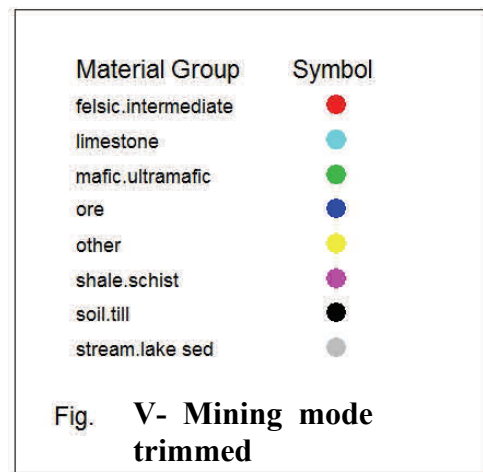
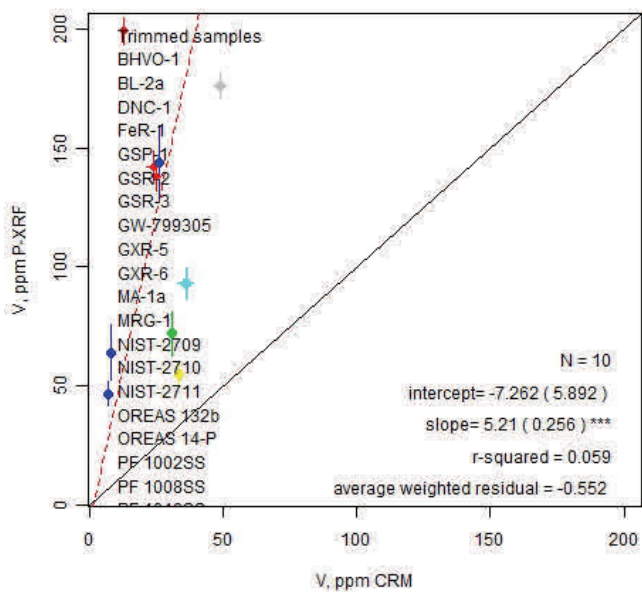
Handheld-HHAM-Mining Mode



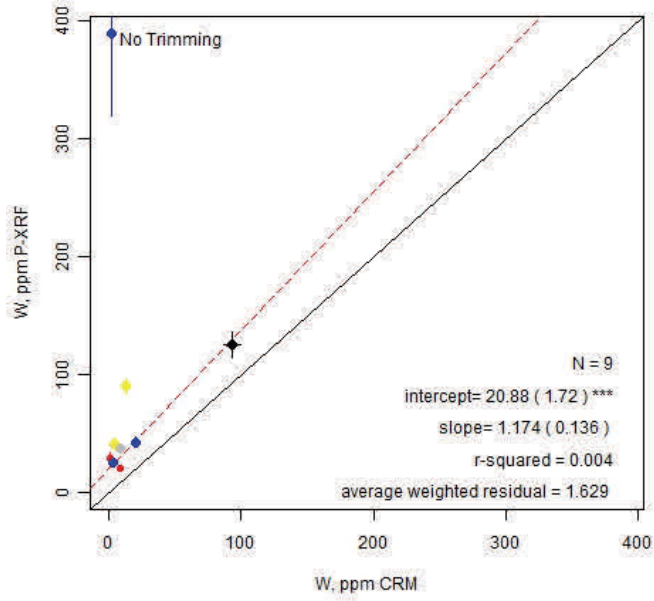
Handheld-HHBM-Mining Mode



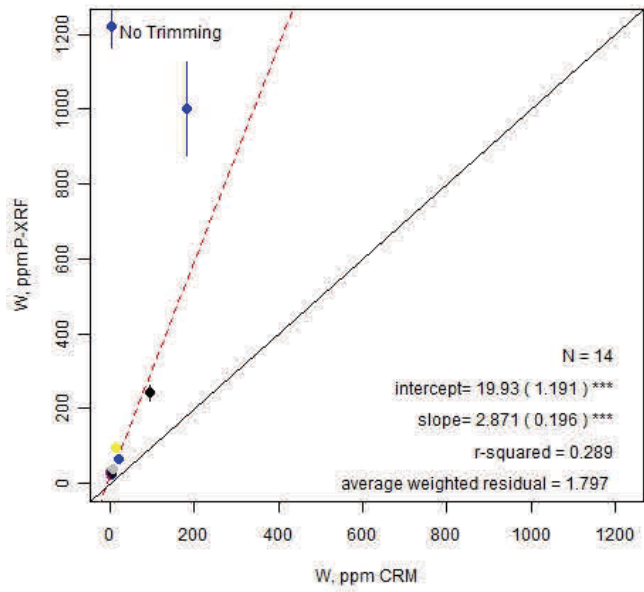
Handheld-HHCM-Mining Mode



Benchtop-BTAM-Mining Mode



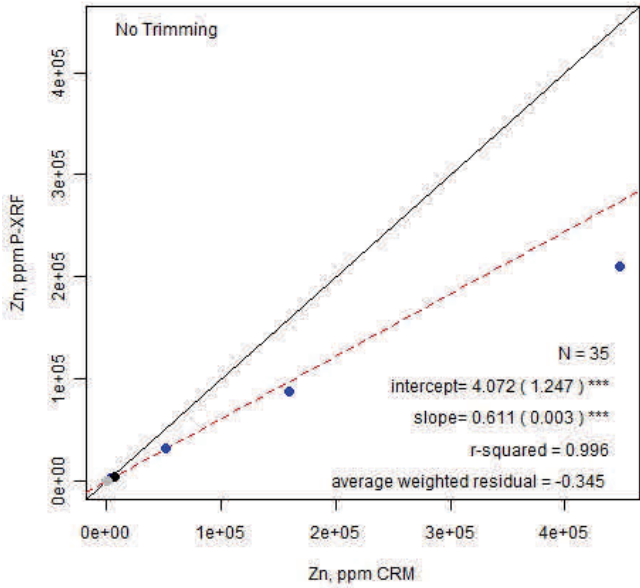
Handheld-HHAM-Mining Mode



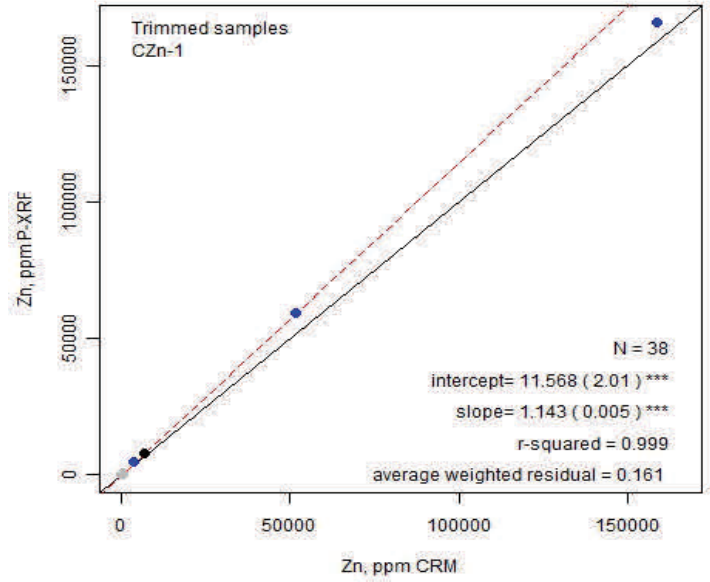
Material Group	Symbol
felsic.intermediate	●
limestone	●
mafic.ultramafic	●
ore	●
other	●
shale.schist	●
soil.till	●
stream.lake sed	●

Fig. W- Mining mode

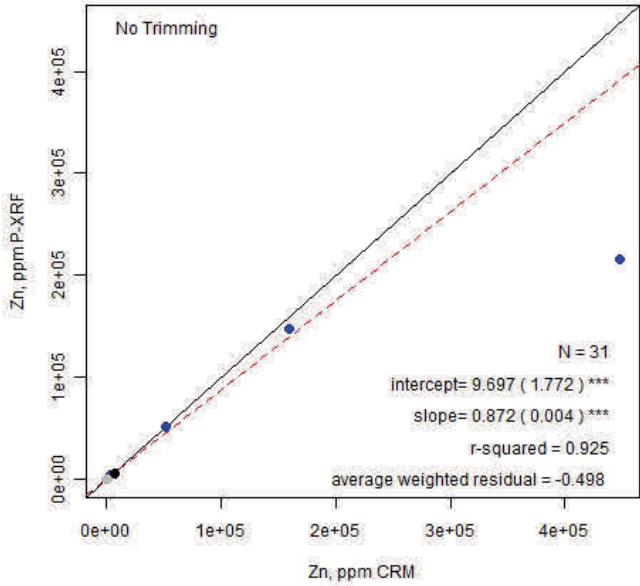
Benchtop-BTAM-Mining Mode



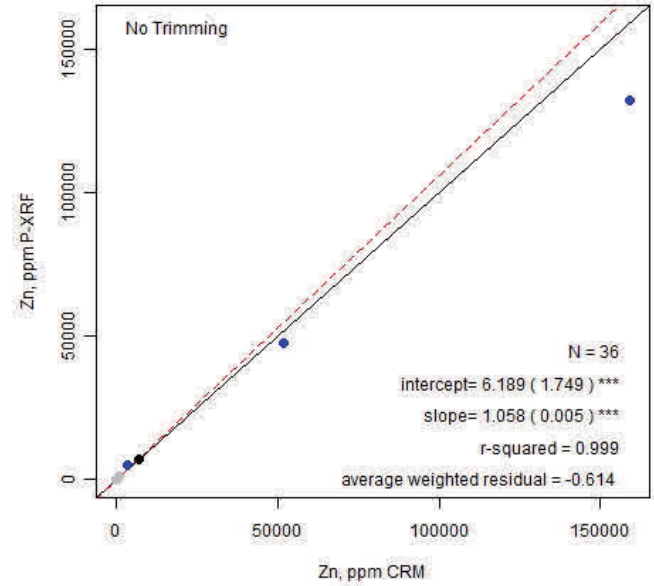
Bench Top-BTBM-Mining Mode



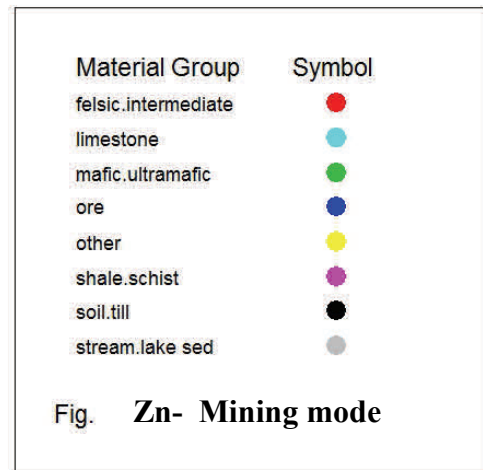
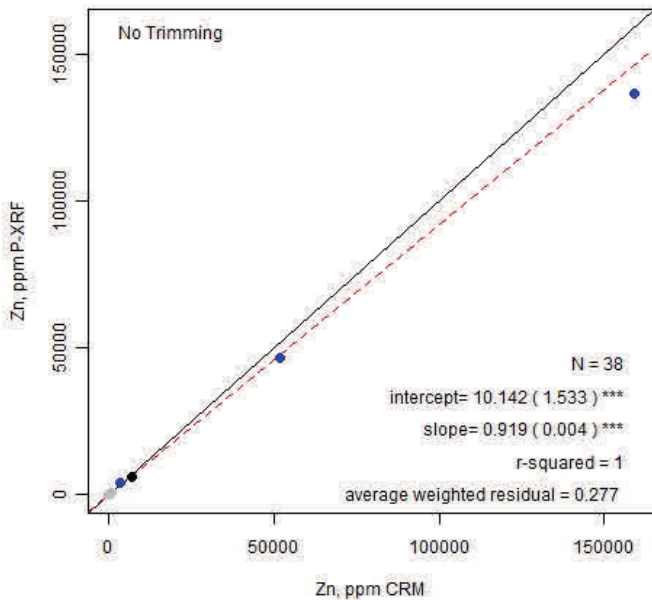
Handheld-HHAM-Mining Mode



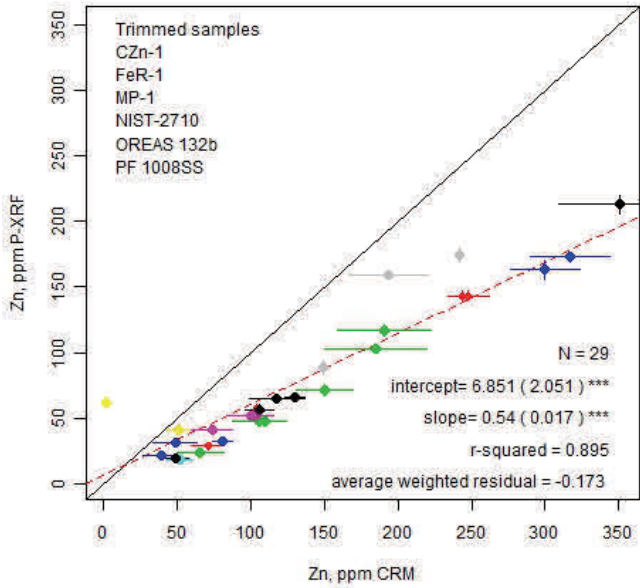
Handheld-HHBM-Mining Mode



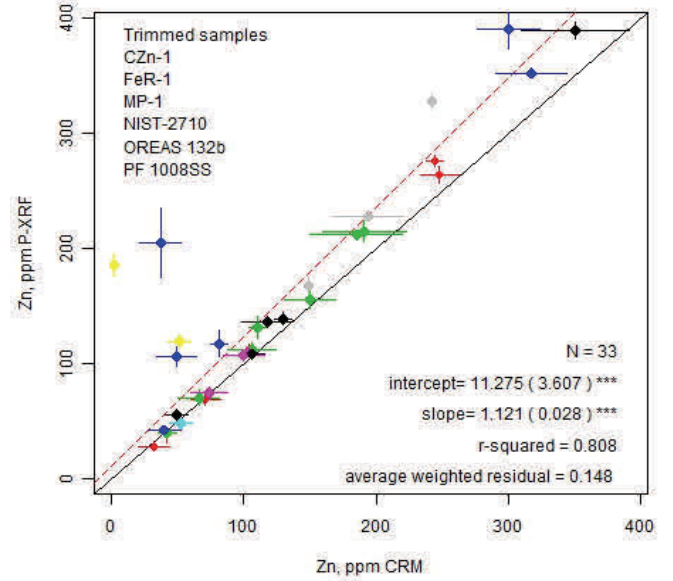
Handheld-HHCM-Mining Mode



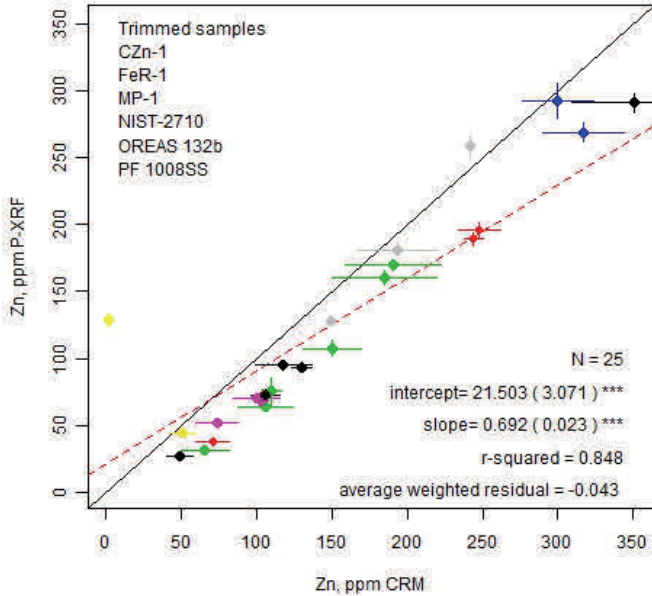
Benchtop-BTAM-Mining Mode



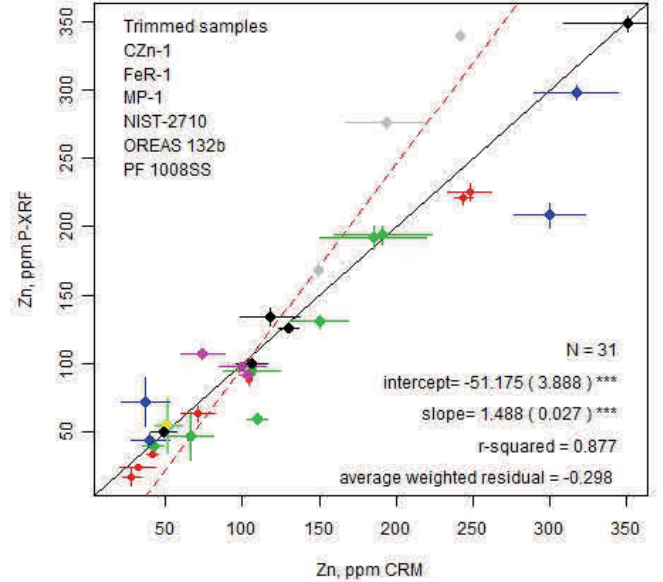
Bench Top-BTBM-Mining Mode



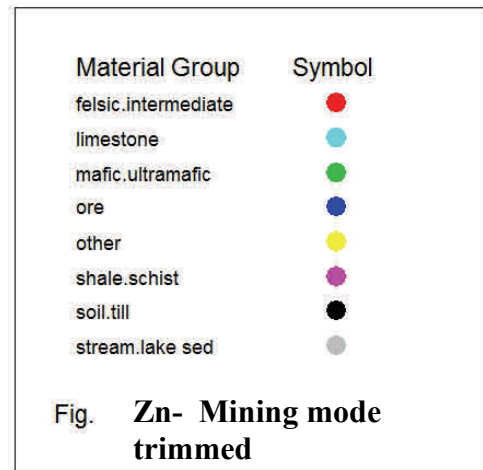
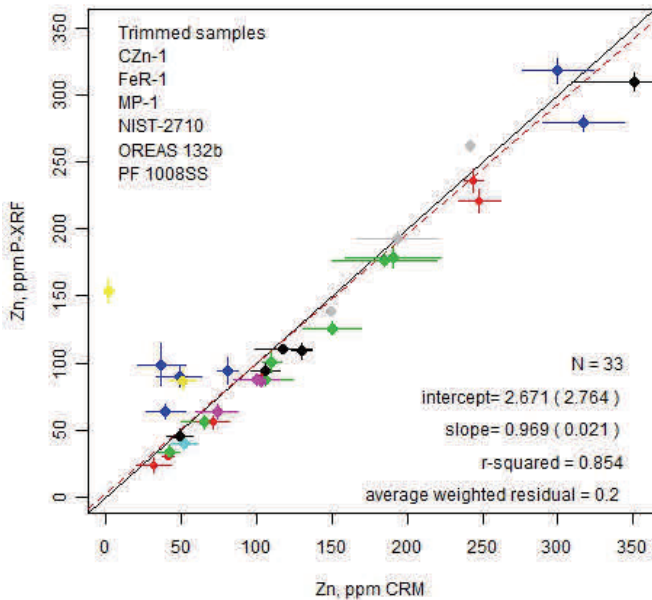
Handheld-HHAM-Mining Mode



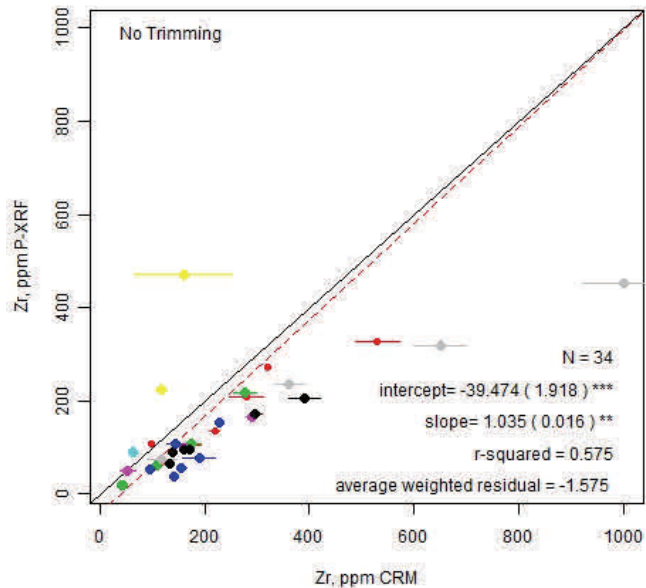
Handheld-HHBM-Mining Mode



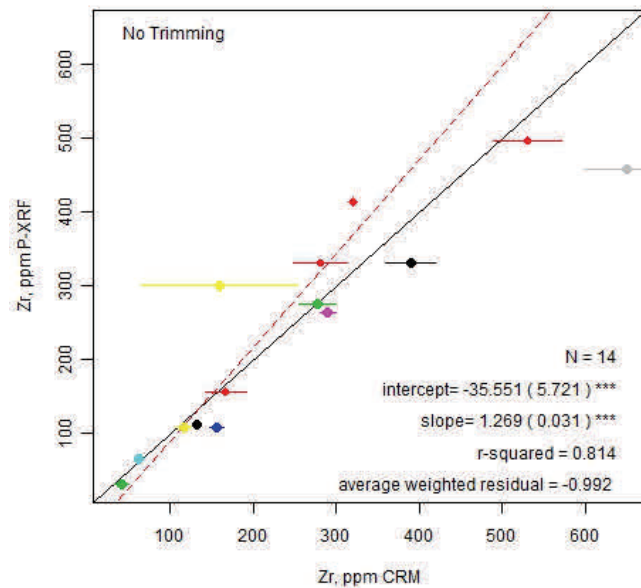
Handheld-HHCM-Mining Mode



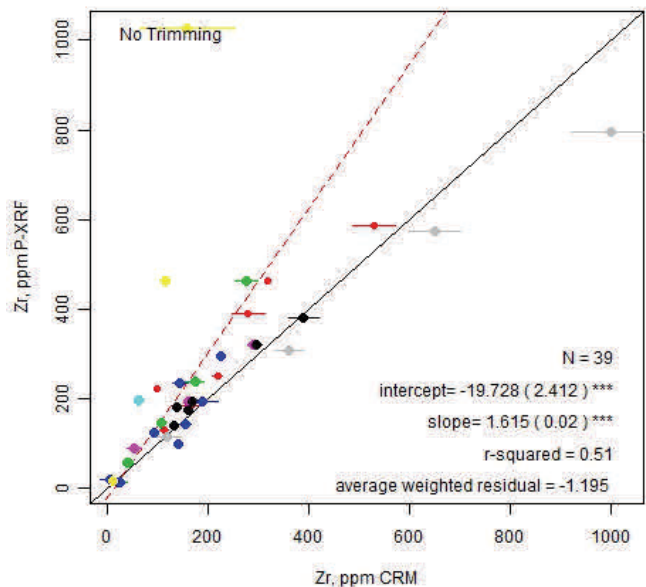
Benchtop-BTAM-Mining Mode



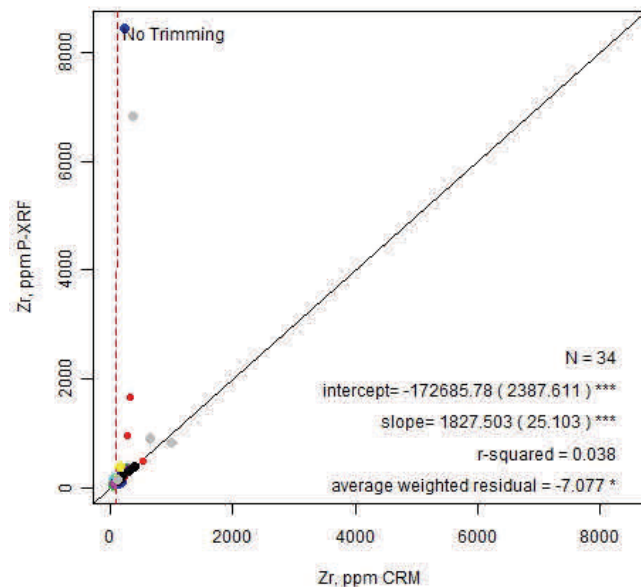
Bench Top-BTBM-Mining Mode



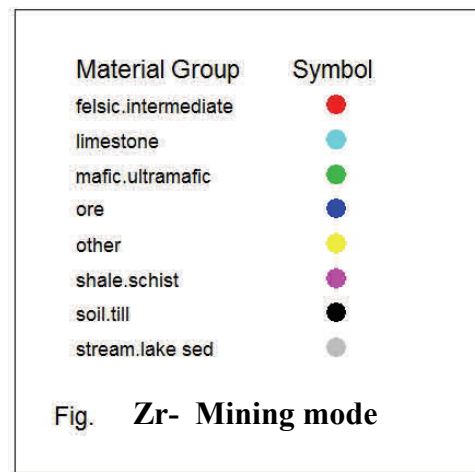
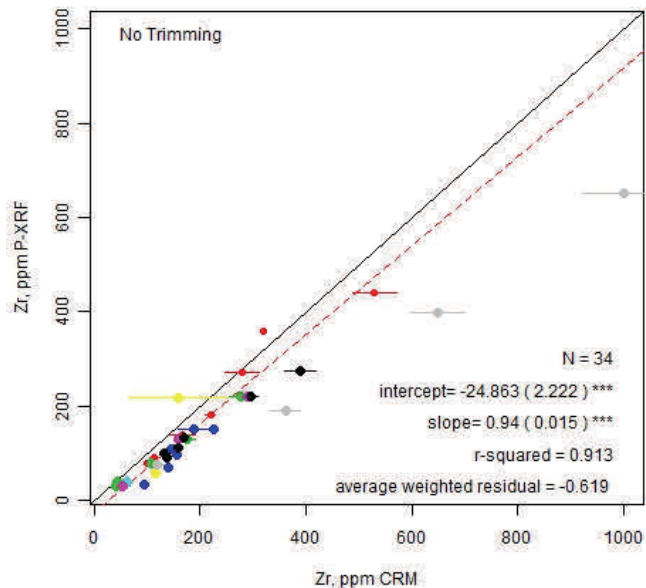
Handheld-HHAM-Mining Mode



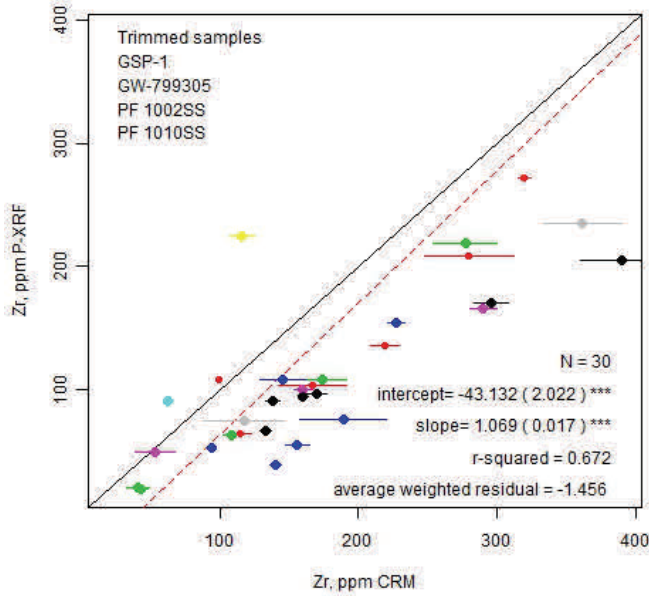
Handheld-HHBM-Mining Mode



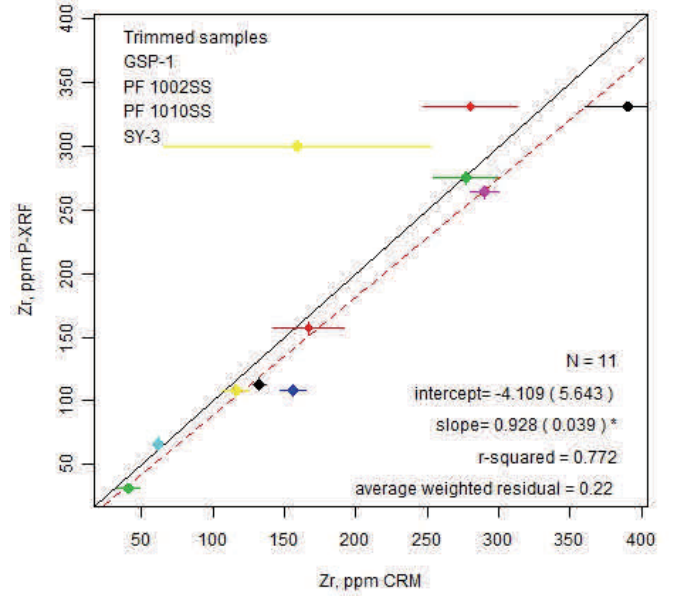
Handheld-HHCM-Mining Mode



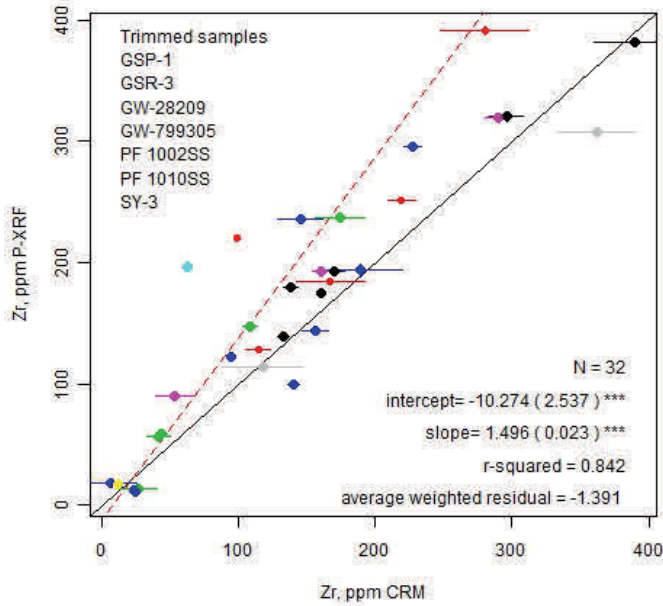
Benchtop-BTAM-Mining Mode



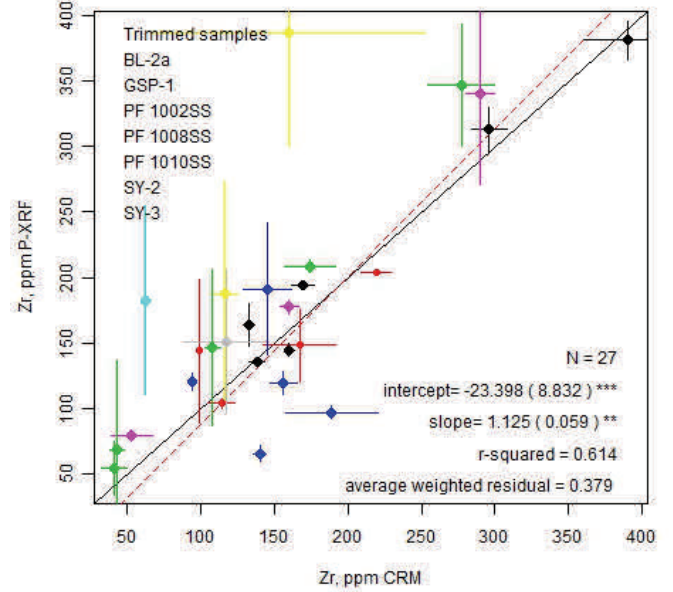
Bench Top-BTBM-Mining Mode



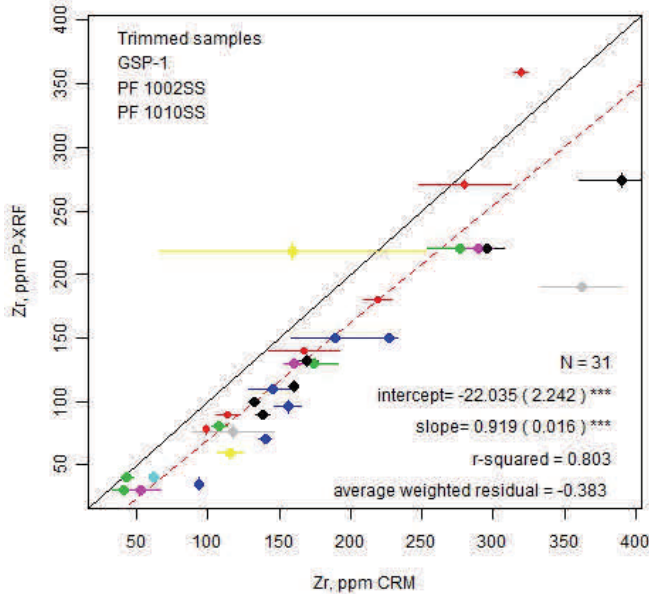
Handheld-HHAM-Mining Mode



Handheld-HHBM-Mining Mode



Handheld-HHCM-Mining Mode



Material Group	Symbol
felsic.intermediate	●
limestone	●
mafic.ultramafic	●
ore	●
other	●
shale.schist	●
soil.till	●
stream.lake sed	●

Fig. Zr- Mining mode trimmed