



**CHRYSOS
CORPORATION**
Assays at the speed of light

Performance Note PN-000

Chrysos PhotonAssay™

Services Summary

Assay Services

The tables below are the commercially available PhotonAssay™ PA1408X assay services. They detail the service code, measurement settings and typical lower detection limits (LDL) and upper detection limits (UDL).

Precision and accuracy for the gold, silver and copper services are outlined in Performance Note PN-001, PN-002 and PN-003, respectively.

Gold Services

Service Code		PAAU02
Description	Standard Gold Analysis	
Reference Disc	AXD	
Measurement	2 × 15s @ 8.5 MeV, Full Power	
Au LDL 3-sigma, blanks	0.015 ppm	
2-sigma, blanks	0.01 ppm	
Au UDL	350 ppm	
Moisture Service	PAAU02M	

Service		PAAU02H
Description	High Gold Analysis	
Reference Disc	AMB	
Measurement	2 × 15s @ 8.5 MeV, Low Power	
Au LDL 3-sigma, blanks	Approx. 1 ppm	
Recommended lower limit*	100 ppm	
Au UDL	3,500 ppm	
Moisture Service	Not Available	

*For samples below 100 ppm, the PAAU02 service will provide better precision

Service		PAAU02HH
Description	Extra High Gold Analysis	
Reference Disc	AMB	
Measurement	2 × 15s @ 8.5 MeV, Very Low Power	
Au LDL 3-sigma, blanks	Approx. 10 ppm	
Recommended lower limit*	1000 ppm	
Au UDL	10,000 ppm	
Moisture Service	Not Available	

*For samples below 1,000 ppm, the PAAU02H service will provide better precision

For samples above 10,000 ppm, contact Chrysos for service information.



Gold and Silver Services

Service Code	PAAUAG02
Description	Gold and Silver Analysis Gold-Optimised
Reference Disc	GXC
Measurement	2 × 15s @ 8.5 MeV, Full Power
Au LDL 3-sigma, blanks	0.025 ppm
2-sigma, blanks	0.017 ppm
Au UDL	350 ppm
Ag LDL 3-sigma, blanks	5.5 ppm
2-sigma, blanks	3.7 ppm
Ag UDL	5,000 ppm
Moisture Service	PAAUAG02M

Service Code	PAAGAU01
Description	Gold and Silver Analysis Silver-Optimised
Reference Disc	GXC
Measurement	1 × 40s @ 8.5 MeV, Full Power
Au LDL 3-sigma, blanks	0.045 ppm
2-sigma, blanks	0.030 ppm
Au UDL	350 ppm
Ag LDL 3-sigma, blanks	2.25 ppm
2-sigma, blanks	1.5 ppm
Ag UDL	5,000 ppm
Moisture Service	PAAGAU01M



Copper Services

Service Code	PACU01A
Description	Copper Analysis, Material-Agnostic
Reference Disc	CXC
Measurement	1 × 40s @ 12.0 MeV, Full Power
Cu LOQ	1000 ppm*
Cu UDL	4 wt%
Moisture Service	PACU01M

* Measurements on uncharacterised materials are expected to exhibit a minimum uncertainty of 5% (2-sigma) at 1000ppm due to the presence of uncorrected interfering elements. For samples below this limit, Chrysos requires the characterisation work outlined in PRO-171 to deploy the PACU01 material-tailored service.

Service Code	PACU01
Description	Copper Analysis, Material-Specific
Reference Disc	CXC
Measurement	1 × 40s @ 12.0 MeV, Full Power
Cu LDL 3-sigma, blanks	45 ppm
2-sigma, blanks	30 ppm
Cu UDL	4 wt%
Moisture Service	PACU01M

Service Code	PACU01H
Description	High Copper Analysis
Reference Disc	CMA
Measurement	1 × 40s @ 12.0 MeV, Low Power
Cu LOQ	1000 ppm
Recommended lower limit*	2 wt%
Cu UDL	30 wt%
Moisture Service	Not Available

*For samples below 2 wt.%, the PACU01 services will provide better precision.



Background and Interfering Elements

Gold and silver services

- The presence of uranium, thorium or barium will decrease the gold and silver precision, particularly at lower grades, and increase the detection limit.
- Elevated levels of bromine or erbium will flag “Interfering Element Corrected (IEC)” with gold and silver values still reported. Significantly elevated levels of bromine or erbium will flag “Interfering Element (IE)”, with no gold or silver value reported.
- For more information on background, interference or attenuating elements for gold and moisture services refer to PN-001, for silver services refer to PN-002.

Copper services

- Elevated levels of praseodymium, silver, zinc or antimony will decrease the copper precision, particularly at lower grades, and increase the detection limit.
- The material-tailored PACU01 service will not be deployed without undertaking the characterisation work outlined in PRO-171.
- Elevated levels of germanium will flag “Interfering Element (IE)” with no copper values reported.
- For more information for the copper service refer to PN-003.

