



For Immediate Release

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Certified Reference Materials Releases for Q1 2024

Stevensville, Michigan, April 16, 2024 – Alpha Resources LLC, the largest manufacturer of aftermarket consumables and reference materials, is pleased to announce the following new product offerings and updates in certified reference materials which have been released in Q1 of 2024 from their lab.

New Lots available in Q1 2024 for Organic Reference Materials include:

- AR1721 | Lot 211123 (Proximate Coal CRM)
- AR2016 | Lot 723C (Soybean CRM)
- AR2029 | Lot 1023W (High Purity Graphite | % Carbon=99.99)
- AR2719 | Lot 240207 (2.30±0.10% S in Calcined Petroleum Coke)
- AR2773 | Lot 731123 (Ultimate Coal CRM)
- AR2935 | Lot 240212 (0.35%±0.02% S in Lube CRM)
- AR3504 | Lot 240311 (2.00%±0.1% S & 5.00±0.25% Cl in Lube CRM)
- AR4106 | Lot 240126 (9.93%±0.07% LOI CRM)

New lots released of available Inorganic Certified Reference Materials in Q1 2024 include:

AR301 | CAST IRON CRM | LOT # 723D

% CARBON	% SULFUR
MEAN = 2.05	MEAN = 0.018
Standard Deviation = ± 0.04	Standard Deviation = ± 0.001
Expanded Uncertainty = ± 0.08	Expanded Uncertainty = ± 0.002
(k=2, @ 95% confidence) (n=44)	(k=2, @ 95% confidence) (n=48)



AR310 | CAST IRON CRM | LOT # 823N

% CARBON	% SULFUR
MEAN = 3.41	MEAN = 0.074
Standard Deviation = ± 0.02	Standard Deviation = ± 0.003
Expanded Uncertainty = ± 0.05	Expanded Uncertainty = ± 0.006
(k=2, @ 95% confidence) (n=40)	(k=2, @ 95% confidence) (n=39)

AR662 | OXYGEN & NITROGEN STAINLESS STEEL PIN CRM | LOT #1023B

% OXYGEN	% NITROGEN
MEAN = 0.0026	MEAN = 0.072
Standard Deviation = ± 0.0003	Standard Deviation = ± 0.001
Expanded Uncertainty = ± 0.0007	Expanded Uncertainty = ± 0.003
(k=2, @ 95% confidence) (n=37)	(k=2, @ 95% confidence) (n=37)

AR956 | HIGH SULFUR CARBON STEEL CHIP CRM | LOT#423K

% CARBON	% SULFUR	% NITROGEN
MEAN = 0.455	MEAN = 0.274	MEAN = 0.0061
Standard Deviation = ± 0.004	Standard Deviation = ± 0.005	Standard Deviation = ± 0.0001
Expanded Uncertainty = ± 0.010	Expanded Uncertainty = ± 0.013	Expanded Uncertainty = ± 0.0003
(k=2, @ 95% confidence) (n=48)	(k=2, @ 95% confidence) (n=39)	(k=2, @ 95% confidence) (n=40)

AR1653 | OXYGEN & NITROGEN STAINLESS STEEL PIN CRM | LOT #1023F

% OXYGEN	% NITROGEN
MEAN = 0.00006	MEAN = 0.0025
Standard Deviation = ± 0.0002	Standard Deviation = ± 0.0003
Expanded Uncertainty = ± 0.0004	Expanded Uncertainty = ± 0.0007
(k=2, @ 95% confidence) (n=44)	(k=2, @ 95% confidence) (n=48)



Value Beyond Measure

A complete list of Alpha Resources certified reference materials maybe found online at: <https://www.alpharesources.com/current-list-of-standards.php>

About Alpha Resources

Founded in 1978, Alpha Resources, LLC is a global leader in the manufacture and distribution of consumables and creation of certified reference materials for use in elemental combustion analysis, and is ISO17034, ISO17025, ISO9001:2015 certified.