

Stability Matters for Certified Reference Materials

ALPHA RESOURCES USES A MULTI-CITATION METHOD FOR EXPANDED UNCERTAINTY



Sometimes, it seems like the range of my certified reference materials shifts depending on my source and that impacts our results. Should I be concerned?

Certified reference materials are characterized by a metrologically valid procedure for specified properties, and are used to validate analytical methods and assess the accuracy of results among laboratories. Reference material certificates state the property values and uncertainties, and confirm the necessary procedures have been performed to ensure validity and traceability. However, our lab has noticed the concentration value offered by certified reference materials vary based on where we source the materials. There is some concern in the lab that this difference will negatively impact the repeatability of our results. Is there an accurate way to increase the confidence limit of certified reference materials?



Standardized expanded confidence limits improve range stability, allowing for repeatable results.

Alpha Resources is committed to providing industry leading reference materials with fit-for-purpose results. In addition to a standardized certification process, accredited to ISO 17025 and 17034, with a strong record of precision and accuracy, Alpha Resources takes additional measures to provide certified values with minimal bias, and expanded confidence limits.

Rather than relying on a single analyzer or analyzer brand, Alpha utilizes multiple analyzers from various OEMs (original equipment manufacturers), to eliminate any potential manufacturer bias. Further, after identifying subtle nuance differences between certified reference materials provided by Metrology Institutes such as NIST (USA), BAM (Germany), JSS (Japan), and others, Alpha Resources' technical team developed a multinational reference approach to traceability to provide customers a more robust certified reference material applicable for international comparisons. In using reference materials from various National Metrology Institutes, Alpha offers validation that better serves labs with international needs and can offer not just a standard deviation or one sigma deviation (68% level of confidence), but the expanded or two sigma deviation (95% level of confidence) for uncertainty. Today, Alpha Resources tries to use as many reference materials as possible that have been benchmarked around the world in providing traceability for the certified reference materials they produce.



To learn more, visit:
alpharesources.com



About Alpha Resources, LLC

Founded in 1978, Alpha Resources, LLC is a global leader in the creation of certified reference materials and the manufacture and distribution of consumables for use in atomic spectroscopy analysis, and is ISO17034, ISO17025, ISO9001:2015 certified. Alpha Resources has a long history of servicing critical industries both domestically and internationally. While Alpha Resources offers both organic and inorganic standards, our inorganic standards provide one of the broadest ranges available in the marketplace.