

PerkinElmer Graphite Parts Certificate of Quality

Our Tubes Are Manufactured and Tested to the Highest Quality Specifications

During manufacturing, a comprehensive quality testing program—including extensive mechanical, electrical, thermal, and analytical testing procedures — is strictly followed. Each lot of graphite tubes is tested to demanding specifications for lifetime, sensitivity and precision. Extensive testing ensures that all graphite components shipped by PerkinElmer provide consistent lot-to-lot performance.

Our Pyrolytic Coating Design is Critical to Achieving High Performance

The specified thickness of pyrolytic coating applied to PerkinElmer graphite improves the total resistance of the graphite tube and the temperature distribution within the tube. Improper pyrolytic coating can shorten tube lifetime dramatically.

The microstructure and density of the surface are important parameters for the atomization kinetics of analyte elements. Irreproducible surface qualities will cause changes in the optimal drying, pyrolysis and atomization temperatures, peak shape and characteristic mass. PerkinElmer's coating specification and quality control ensures consistency from tube to tube.

You Can Depend on Our Extensive Experience

PerkinElmer has over five decades of experience in the design and development of graphite furnace systems and materials for atomic absorption instruments. Years of PerkinElmer development have yielded an exclusive blend of materials used to produce PerkinElmer graphite tubes.

The heating programs of PerkinElmer AA instrumentation have been fine-tuned using exclusive graphite tubes and contacts. Therefore, any other graphite has not been optimized for use with PerkinElmer instruments and may yield inaccurate analytical results.

Conditioning New Tubes Before Use

New graphite tubes must be conditioned prior to application using the temperature program included in the "Condition Tube" program feature of the Syngistix™ for AA software. Alternatively, the program in the table below can be used:

Step	Tube Temp. (°C)	Time (s)		Read	Gas
		Ramp	Hold		
1	2200	60	5	-	Max. purge gas flow rate in all program steps
2	20	1	20	-	
3	2200	10	10	-	
4	20	1	20	-	
5	2300	10	10	-	
6	20	1	20	-	
7	2400	10	10	-	
8	20	1	20	-	
9	2500	10	10	-	

Authorized Tubes and Imitations

The quality of analytical results and the cost of ownership in graphite furnace AAS strongly depend on the quality of the graphite parts. Graphite quality can be affected by type, structure, analytical purity as well as the production procedure. The full analytical performance can only be obtained when using original PerkinElmer graphite parts. Instructions regarding proper graphite furnace operation and maintenance can be found in the document titled "Analytical Quality of Genuine PKI Graphite Tech Note" available at www.perkinelmer.com.

For further information please contact a PerkinElmer Representative at your local office. For a complete listing of our global offices, visit www.perkinelmer.com.



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