## **APPLICATION NOTE**

## **Germanium Tetrachloride – Fiber Optic Grade**

## **Metallic Impurities Analyzed by ICP**

Element	Maximum Level (ppb)	Typical Level (ppb) (ppb)	Detection Limit (ppb)	
Aluminum, Al	1.0	< 0.5	0.1	
Cobalt, Co	0.5	< 0.2	0.1	
Chromium, Cr	1.0	< 0.4	0.1	
Copper, Cu	1.0	< 0.2	0.1	
Iron, Fe	2.0	< 1.0	0.1	
Manganese, Mn	0.5	< 0.1	0.1	
Nickel, Ni	1.0	< 0.3	0.1	
Vanadium, V	0.5	< 0.1	0.1	
Zinc, Zn	1.0	< 0.5	0.1	
Total Combined	10	< 3.0		

## Infrared Active Impurities Analyzed by Fourier Transform Infrared Spectroscopy (FTIRS) using 10.0 cm Cell Path

Species	Wave Number (cm <sub>-1</sub> ±10)	Factor (ppm • cm)	Maximum Level (ppm)	Typical Level (ppm)
Hydroxyl, -OH	3610	61	2.0	< 1.0
Organic, CH	2960	280	1.0	< 0.5
Organic, CH <sub>2</sub>	2930	280	1.0	< 0.5
Hydrogen Chloride, HCI	2840	1170	4.0	< 2.0
H-Donors as -OH	Combined Calculation		10.0	< 3.0

Other cell sizes available.

Contact us to inquire about our various packaging and valves assemblies.

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