

THE SECRET TO DRAMATICALLY REDUCING GC/MS RUNNING COSTS





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How much could you save if you switched your GC/MS to cheaper helium gas?

Many labs use high purity He 6.0 gas as an insurance policy. It protects their GC analytical results from being impacted by gas contaminants and extends the lifetime of both columns and the instrument itself.

What if you could strip contaminants from your gas supply, turning cheaper balloon grade helium into the equivalent of higher grade helium? That's what Agilent Gas Clean Filters do.

Agilent Gas Clean Filters are designed to be inserted in the gas line, immediately before the GC or GC-MS inlet. They purify the gas before it reaches your instrument, removing oxygen, moisture and hydrocarbons. The result is high purity performance from balloon-grade helium.

AGILENT GAS CLEAN FILTERS



Gas contaminants can not only jeopardize your analytical sensitivity and accuracy, they can cause installation delays and premature instrument failure. Purifying your gases is one of the most important steps you can take to ensure optimal system performance.

Agilent manufactures Gas Clean Filters in a variety of sizes and configurations to remove oxygen, moisture, and hydrocarbons.

They can be used with any manufacturer's GC or GC/MS.

The filters deliver:

- Increased GC/MS sensitivity
- Higher data accuracy and less maintenance
- Protection of your instrument and column
- Tool-free replacement, with less downtime than in-line filters

Carrier gas contributes to total analytical cost. The higher the purity of the gas the more expensive it is. Using lower grade cheaper carrier gas with Gas Clean Filters allows you to lower your total analytical cost without sacrificing performance.



Online selection tool

Select the best Gas Clean filter for your GC or GC/MS application with our [online selection tool](#)

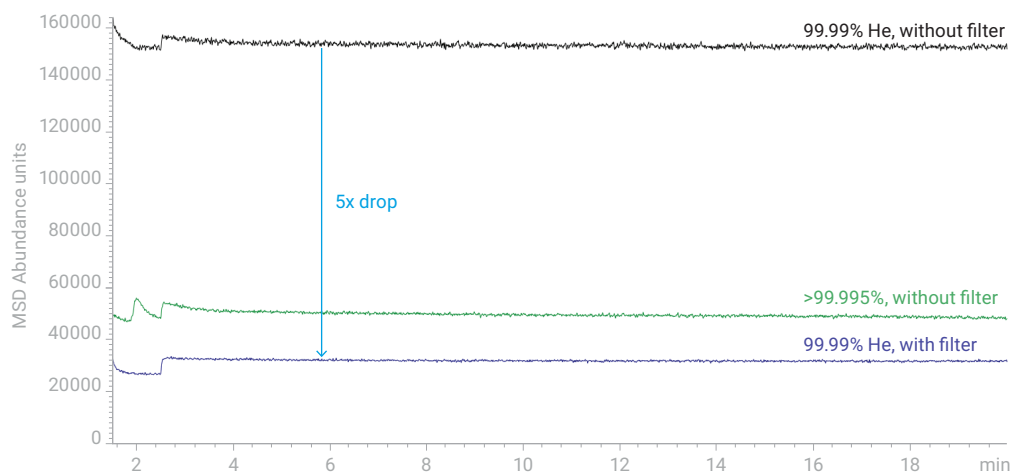


Figure 1: EICs (32 m/z) for O_2 , A comparison of balloon grade (99.99%) He (with and without a carrier Gas Clean filter) and Higher grade (>99.995%) He (without filter). Using a carrier gas filter with balloon grade He dropped the O_2 abundance to levels lower than the higher grade He (>99.995%) without a filter.

ANNUAL SAVINGS CALCULATION



Calculate the annual savings you could achieve by switching your GC/MS from high purity helium to balloon-grade.

With balloon-grade He typically being much cheaper than high purity helium gas the savings could really add up if you are using a lot of gas each year.

Use this interactive worksheet to calculate how much you could save by using a Gas Clean Filter and balloon-grade (99.995%) helium instead of high purity helium.

Parameter	Details	Enter values here. <small>To enter the values, open this PDF in the Adobe Acrobat App.</small>	
A Helium consumption	How many helium cylinders do you consume per GC per year?	» <input type="text"/>	Cylinder(s) per year
B Cost of helium	What price do you pay per cylinder of He (99.9999% or higher purity)?	» <input type="text"/>	\$ per cylinder
C Total number of GCs in lab	How many GCs do you have in your lab?	» <input type="text"/>	GCs
D Total cost of using high purity helium in your lab per year (A x B x C)			\$ per year
E Cost of same volume of balloon-grade helium (99.995%) (A x B/2* x C)			\$ per year
F Price of a Gas Clean Filter cartridge(s)** (\$276-154 depending on type)		» <input type="text"/>	\$ per cartridge
G Cost saving per year D-(E+(FxA/3))			\$

* Estimated cost of balloon-grade He is 50% of high purity He.

** Average K-type gas cylinder volume = 10,000 Liter; He balloon grade (99.995%) contains ~5 ppm O₂ (50 mL total). One Gas Clean Filter cartridge can convert 25,000-30,000 L He from 99.995% to >99.9999% and 70,000L of He from 99.999% to 99.9999%.

Filters should be changed when the built in indicator changes color (typically after 3 cylinders 99.995% He).

For higher grade Helium (>99.995%) filters should be changed after 7 cylinders (70,000 L).

Pricing information is available [here](#) (for Agilent account holders).

Ensure peak performance throughout your GC flow path

Agilent GC and GC/MS supplies are brought to you by the same people who engineered our GC and GC/MS instruments, so you can count on outstanding results and support.

Agilent J&W GC columns deliver the lowest bleed levels, the best inertness, and the tightest column-to-column reproducibility.

Agilent supplies work seamlessly with a variety of instrument makes and models from Bruker, PerkinElmer, Shimadzu, Thermo Scientific, and more.



To order now, visit www.agilent.com/chem/gasclean

Or call **1-800-227-9770** (in U.S. and Canada)

To find your local Agilent Representative or Agilent Authorized Distributor, visit

www.agilent.com/chem/contactus

CrossLab

CrossLab is an Agilent capability that integrates services, consumables and lab-wide resource management to help laboratories improve efficiency, optimize operations, increase instrument uptime, develop user skill and more.

Agilent CrossLab supports Agilent and select non-Agilent instruments and provides consultative support for workflow enablement, lab analytics, compliance, inventory management and asset management, including relocation services.

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