

# What is the cost of nitrogen gas?



A nitrogen cylinder delivery contract may seem like the easiest way to manage your laboratory budget, however, the purchase of a nitrogen gas generator is a more cost-effective way to secure ongoing nitrogen gas supply. While the initial outlay for cylinders is low, contracts are often subject to regular price increases, as well as hidden costs such as regulator maintenance, delivery, fuel and cylinder & pallet rental charges, which can soon add up. A gas generator offers a more economical solution, typically offering savings versus cylinder supply, within the first year of ownership.

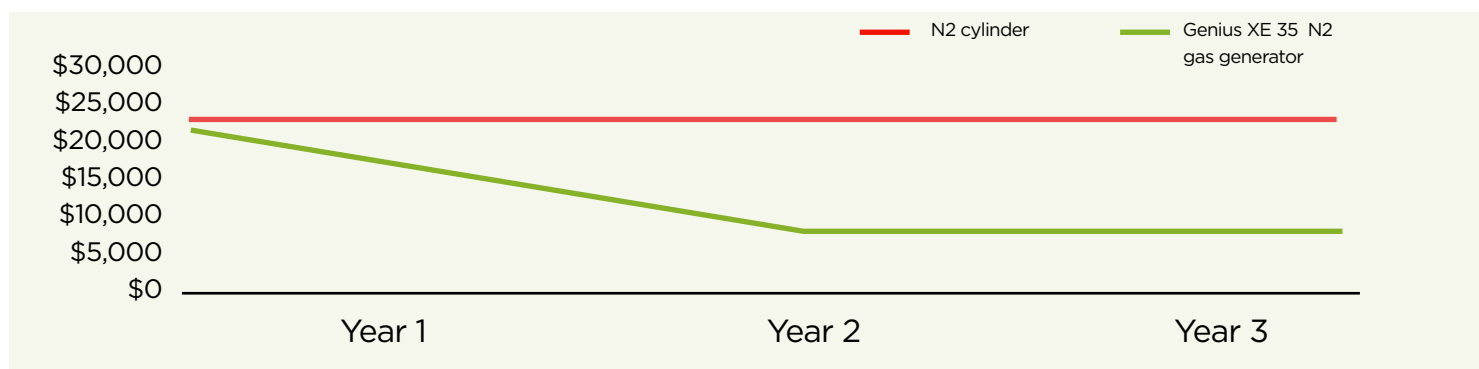
One LC-MS instrument running 8 hours a day, 5 days a week that requires 32 L/min of nitrogen will consume around 4 million liters of nitrogen per year, that is equivalent to approximately 450 cylinders of nitrogen. The table below is a break down the costs associated with ordering 450 cylinders:

Typical 3 year cylinder supply costs for one LC-MS				
	Year 1	Year 2	Year 3	Total
Cost of gas (\$45 per cylinder)	\$20,250	\$20,250	\$20,250	\$60,750
Cost of cylinder rental (\$50/month)	\$600	\$600	\$600	\$1,800
Delivery cost (\$30 per delivery of 5 cylinders)	\$2,700	\$2,700	\$2,700	\$8,100
<b>Total spend over 3 years</b>				<b>\$70,650</b>




Compare this with the cost of purchasing Peak Scientific's Genius XE 35 standalone nitrogen generator where you can save **51% over 3 years**, and even more if your lab has more than one LC-MS.

Typical 3 year Genius XE 35 generator supply costs for one LC-MS				
	Year 1	Year 2	Year 3	Total
Generator and Installation	\$21,904	\$0	\$0	\$21,904
Complete Maintenance Plan	Warranty period	\$5,450	\$5,450	\$10,900
Power Consumption (8h per day @ 1.1 kWh for 365 days)	\$550	\$550	\$550	\$1,650
<b>Total spend over 3 years</b>				<b>\$34,454</b>

## 3 year cost of ownership comparison: N2 cylinder vs N2 generator



## Why a gas generator?

	Gas Generator	Cylinder
 Convenient	<ul style="list-style-type: none"> <li>✓ 24/7 gas production ensures you're never left without gas</li> <li>✓ On-demand production</li> <li>✓ Single annual maintenance required</li> </ul>	<ul style="list-style-type: none"> <li>✗ Gas consumption has to be actively monitored so you don't run out of gas</li> <li>✗ Cylinders need to be regularly replaced</li> <li>✗ Difficult to install cylinders</li> <li>✗ Cylinders take up large amounts of space</li> </ul>
 Consistent	<ul style="list-style-type: none"> <li>✓ Consistent purity, flow rate and pressure</li> </ul>	<ul style="list-style-type: none"> <li>✗ Inconsistent purity between cylinders</li> <li>✗ Purity lower at the end of a cylinder</li> </ul>
 Economic	<ul style="list-style-type: none"> <li>✓ Quick return on investment</li> <li>✓ Low ongoing costs</li> <li>✓ Minimal downtime (limited only to one annual maintenance)</li> </ul>	<ul style="list-style-type: none"> <li>✗ On-going delivery and rental cost</li> <li>✗ Cylinder prices continue to increase on an annual or even bi-annual basis</li> <li>✗ Instrument downtime during cylinder changeover</li> <li>✗ Labs must rent cylinders and buy gas</li> </ul>
 Safe	<ul style="list-style-type: none"> <li>✓ Minimal gas storage volume</li> <li>✓ Low pressure storage</li> <li>✓ Gas on demand - zero waste</li> </ul>	<ul style="list-style-type: none"> <li>✗ High pressure and large volume tanks</li> <li>✗ Health and safety risks during transportation and handling of cylinders</li> <li>✗ High volume of compressed gas means high potential for undetected leaks in pipework</li> </ul>
 Green	<ul style="list-style-type: none"> <li>✓ No deliveries and collections of cylinders energy efficient</li> <li>✓ Reduced carbon footprint</li> </ul>	<ul style="list-style-type: none"> <li>✗ High energy requirements for compression and purification of gas</li> <li>✗ Cylinders must be transported and replaced</li> <li>✗ End of cylinder not used - wastage</li> </ul>
 Protected	<ul style="list-style-type: none"> <li>✓ Comprehensive on-site warranty and service contracts</li> <li>✓ Performed by dedicated Peak field service engineers using genuine Peak parts.</li> </ul>	<ul style="list-style-type: none"> <li>✗ Frequent maintenance required and not covered by a maintenance contract causing unplanned irregular costs</li> </ul>

**Contact us today** to discover more!

**Web:** [www.peakscientific.com/nitrogen-gas-costs](http://www.peakscientific.com/nitrogen-gas-costs)

**Email:** [discover@peakscientific.com](mailto:discover@peakscientific.com)