

Get in the O-zone

Modified oxygen banishes bad smells

I'm usually at least a little disappointed when I stay in hotels because of the smell. Even prestigious establishments often have air that's stale or overly perfumed in an attempt to cover up mustiness and second-hand smoke residue. When my wife and I spent a few nights in a place that was uncommonly fresh, it made me ask questions. And ozone was the answer I got.

Ozone is a very specific form of oxygen, and the active substance at work is the same molecular compound that's supposed to be present in our upper atmosphere, protecting the planet from the sun's ultraviolet rays. And yes, ozone at ground level in cities is considered a form of pollution. Ozonization is also the most advanced method for sterilizing drinking water, used in more than 3,000 municipalities worldwide and at most bottled water plants. Naturally occurring ozone is what makes the air smell fresh after a thunderstorm, too.

I mention all these things only so you can forget about them in the context of odour control. The smell-busting ozone treatment regime you'll learn about here is significantly different than sun protection, exhaust gas hazards, bottled water and the smell of air after a storm. Ozone odour control is a completely safe process when administered properly, and highly effective for eliminating obvious smells and background odours in dwellings and vehicles. It also does its job extremely quickly, even in spaces affected by smoke damage from a fire.

Ozone is merely an ordinary oxygen molecule (O_2) with an extra oxygen atom tacked on to form O_3 . In high enough concentrations, ozone has a powerful oxidizing effect — it doesn't mask existing odours, it eliminates the compounds causing them. Afterward, ozone reverts to ordinary oxygen with no long-term residual presence.

The heart of odour-busting ozone is an industrial-strength ozone generator. Typically costing between \$500 and



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An industrial-strength ozone generator makes quick and safe work of persistent odours in homes and vehicles.

\$2,000, all models use electricity to create an output of gaseous ozone from the air. Volumes of the gas are high enough to flood enclosed, evacuated spaces with high concentrations of O_3 for short-duration shock treatments. Don't confuse ozone generators with consumer-grade, ozone-producing electric air fresheners or cleaners of the sort that regularly elicit government warnings.

There are two options for making use of ozone odour control in your home, cottage or vehicle. You can buy a generator yourself or hire a professional. This is a new business sector, so you won't find ozone-service professionals everywhere. In fact, they're pretty rare at moment, though that's changing.

Typical treatment prices range from \$50 for cars to \$350 for homes.

Proper ozone treatments should be conducted in empty

and sealed spaces. Several hours of concentrated ozone usually does the trick, after which the space can be opened and ventilated. Even if you leave the room closed, nothing can stop the eventual reversion of O_3 back to harmless O_2 once the generator is shut off. The chemical instability of the ozone molecule guarantees it.

That said, plants, pets and people must leave the area during treatment as ozone can be a powerful irritant in concentrations high enough to eliminate odours. Aquariums can be left as the water protects fish. Homes can be treated or just single rooms. Fans are used to enhance the distribution of ozone during treatment. The best ozone generators also have built-in timers to automate the treatment. In addition to an ozone generator for do-it-yourself operations, you'll also need a respirator to protect yourself as you open up a newly treated room for ventilation.

Although ozone treatments are very powerful, it's important to understand that their results may be temporary. Ozone won't stop new mould, smoke, dampness or mice from re-establishing new smells. You still need to cure the root cause of odour problems or resign yourself to regular treatments. I've used three types of ozone generators to freshen a basement, an attic and two vehicles. The results were fast and excellent in most cases, though not permanent. Re-treatment every six months makes sense.

Some reports note that heavy pet urine odours are not always completely eliminated.

Ozone is an example of how knowledge and sophistication lead to products and techniques that replace the need for persistent chemical toxins.

You've got to be happy about a system that uses something as organic as oxygen to make our built environment cleaner and healthier.

Send your questions to steve@stevemaxwell.ca.



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