

# ODOUR IDENTIFICATION

## The Human Sense of Smell

Although the human sense of smell is feeble compared to that of many animals, it is still very acute. We can recognise thousands of different smells, and we are able to detect odours even in infinitesimal quantities. Humans are capable of detecting certain substances in dilutions of less than one part in several billion parts of air. \*

## Odour Detection Variances Between Individuals

Our smelling ability increases to reach a plateau at about the age of eight, and declines in old age. Some researchers claim that our smell-sensitivity begins to deteriorate long before old age, perhaps even from the early 20s. But other scientists report that smelling ability depends on the person's state of mental and physical health, with some very healthy 80-year-olds having the same olfactory prowess as young adults. Women consistently out-perform men on all tests of smelling ability.<sup>1</sup>

## Are Odours Harmful?

Effects from exposure to chemical odours can be an immediate health threat, a long-term threat, or may pose no health threat at all. Getting sick from chemical odours will depend on what you are exposed to, how much you are exposed to, how long you are exposed, how often you are exposed, and your individual sensitivity to the odour.<sup>1</sup>

## Who Monitors the Air?

As of May 1st, 2003, ambient air quality monitoring in Hamilton's industrial core has been operated, serviced and maintained by the Hamilton Air Monitoring Network .

The HAMN collects and reports accurate real-time continuous measurements of ambient pollutants at various sites located around the Hamilton industrial area. As well, there are non-continuous air-monitoring samplers in the HAMN network that collect data on a rotating schedule.<sup>2</sup>

The data gathered by this network is easily accessible to the public through their website. For more information including monitoring locations, pollutant trends, and real-time data for your neighbourhood, please visit: [www.hamnair.ca](http://www.hamnair.ca)

<sup>1</sup> Sourced from Social Issues Resource Centre [http://www.sirc.org/public/smell\\_human.html](http://www.sirc.org/public/smell_human.html) <sup>2</sup> Sourced from [www.hamnair.ca](http://www.hamnair.ca)

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The following chart is to be used as a guide. Proper monitoring equipment is required in order to identify a pollutant with 100% accuracy.

Compound:	Smells Like:	Acute Health Impacts
Sulfur Dioxide	Burnt Matches	Mild bronchial constriction, changes in metabolism, irritation to respiratory tract and eyes, increased airway resistance.
TRS- Total Reduced Sulphur	Rotten Eggs	Nausea, loss of appetite, loss of sleep, headaches and shortness of breath, cough and throat irritation.
Hydrogen Sulfide	Rotten Egg (1-30ppm)	Severe respiratory tract irritation, eye irritation / acute conjunctivitis, shock.
Nitrogen Dioxide	Faint, Pungent, Irritating Odour	Irritation to lungs & upper respiratory tract. Eye irritation & inflammation.
Hydrogen Cyanide	Bitter Almonds	Weakness, headache, confusion, vertigo, fatigue, anxiety, dyspnea, and occasionally nausea and vomiting.
Ammonia	Pungent, Distinct, Cat Pee	Inhalation of vapours may result in pulmonary edema and chemical pneumonitis.

### What's that "rancid popcorn" smell?

This odour is the result of tallow. Tallow is a rendered form of animal fat that is used as a lubricant during the metal cutting and steel rolling process. Although there are no health impacts associated with this odour, please alert the Ministry of Environment on days when it is pungent.

*According to the Environmental Protection Act (EPA), you have the right to enjoy your property. Any company or individual releasing a contaminant (solid, liquid, odour, etc) that causes impairment or injury to the natural environment, its safety, or its uses, is in violation.*

For more information on these compounds, and for information on additional compounds, please see our website (address on back).





# TAKE ACTION!

## REPORT EMISSIONS OF CONCERN

If you notice an odour or emission of concern, we strongly advise you to take action and notify the proper channels. This helps to ensure that the polluter is held accountable and pollution trends don't go unnoticed.

### Contact the MOE (Ministry of Environment)

Specify that you would like to lodge an official complaint—this ensures your concern is properly recorded. Be prepared to indicate the following with regards to odour:

- Date and time of the occurrence
- Wind direction
- Location
- Smell description

*\* If using email, do not cc; ensure address is within the To: line.*

*\* When calling, if you feel as though your questions were not properly answered, please try again as it is likely another receptionist will field the call.*

**Who is the MOE and what happens when you lodge a formal complaint?**  
Check out our website for more information.



The Good Neighbour Campaign, a project of Environment Hamilton, has been working to open lines of communication between industry and the community to reduce pollution.

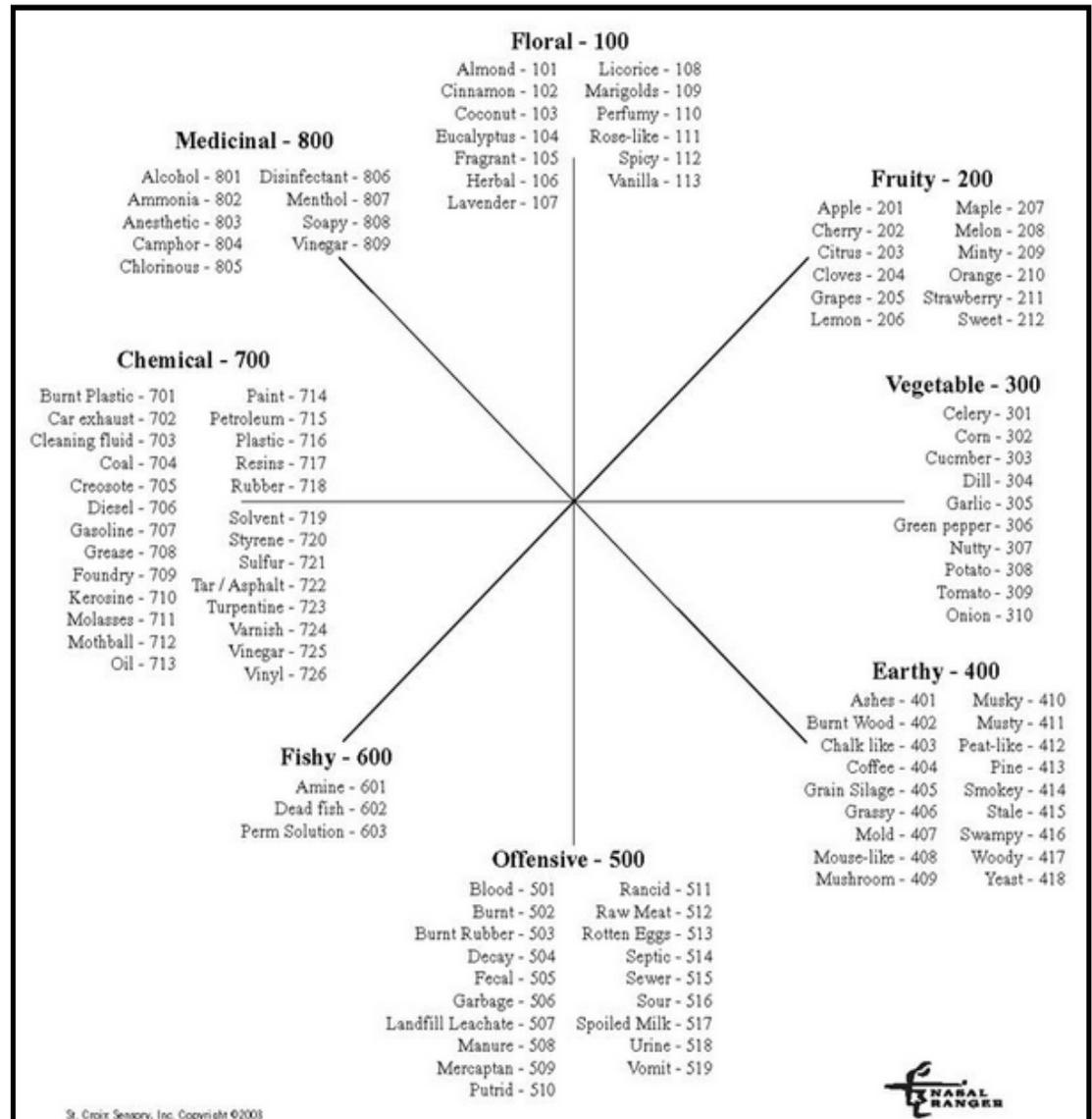
For more info, visit our website or call:

**905-549-0900**

[www.goodneighbourcampaign.ca/stackwatch](http://www.goodneighbourcampaign.ca/stackwatch)

## ODOUR DESCRIPTORS WHEEL

This tool can be used to help describe odours within the community. The wheel was created by St. Croix Sensory and provided by the MOE.



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