

**DEPARTMENT OF HEALTH AND WELLNESS
OFFICE OF THE CHIEF MEDICAL OFFICER OF HEALTH**

INTERIM HEALTH ADVISORY LEVEL

SUBJECT: MtBE (Methyl tertiary-Butyl Ether) IN DRINKING WATER

A level of 15 ug/l (micrograms per liter) has been adopted as the New Brunswick Interim Health Advisory Level for MtBE in drinking water.

What Is MtBE?

MtBE is a volatile, organic chemical. Its major use is as a gasoline additive to enhance more complete burning and to lower exhaust emissions. MtBE may represent up to 15% by volume of gasoline. MtBE may also be present in heating oil and other fuels.

How Does MtBE Get Into Drinking Water?

Contamination of drinking water systems with MtBE have occurred due to leaks from underground and above ground petroleum storage tanks and pipelines. Due to its small molecular size and its high solubility in water, MtBE moves rapidly into ground water, faster than other constituents of gasoline do. It does not adhere well to soil particles, and it does not appear to biodegrade significantly in the environment.

What Are the Health Effects Connected to MtBE in Drinking Water?

From a drinking water perspective the most important and sensitive human response to MtBE in drinking water is its objectionable taste and odour at relatively low levels. The concentration levels at which humans can taste and smell MtBE are far lower than the levels at which toxicological effects have been observed in animal studies available to date.

Studies done to date would indicate that keeping MtBE concentrations below 15 ug/l (micrograms per litre) of water will likely avert unpleasant taste and odour effects, recognizing that some people may detect the chemical below this level.

Concentrations in the 15 ug/l (micrograms per litre) range are about 20,000 to 100,000 (or more) times lower than the range of exposure levels in which cancer or noncancer effects have been observed in animal studies.

Can MtBE Be Removed From Drinking Water?

It is possible to remove or reduce the levels of MtBE using specialized water treatment devices. Public Health and Environment & Local Government offices are able to provide homeowners with some advice on this issue.

Are There Things I Can Do To Protect My Water System from MtBE Contamination?

The number one rule is to ensure that the water source is not exposed to accidental spills of combustion fuels such as gasoline and home heating oil. If a fuel spill does occur, immediately contact a Regional Environment & Local Government office for advice on cleaning up the spill area so as to reduce the risk of contaminating your water supply. Don't pour any fuel products into sinks or drains. Keep fuel containers stored in a secure area and away from the water supply.

Should I Have My Water Tested For MtBE?

Because of the low taste & odour threshold of MtBE, testing should not be required unless the water develops a distinct taste & odour problem. Taste & odour in drinking water is most often associated with excess minerals or bacterial activity in the well. You may want to consult with a Public Health office for advice on what testing should be done on your water supply.

Do I Need To Do Anything If MtBe Is Present In My Water Supply At A Level Lower Than 15 Micrograms Per Liter Of Water?

Because of the limited information that is available at this time on health effects of long term exposure to low levels of MtBE, **detection** of any levels of MtBE in a water supply should be followed up. Local Public Health and Environment & Local Government offices can provide homeowners with some advice on this issue

Where Can I Get More Information on MtBE or Other Drinking Water Concerns?

Computer users will find information on the Health Canada web site at www.hc-sc.gc.ca/waterquality. You can also get information from your local office of the Department of Health and Wellness or from the Sciences and Reporting branch of the Department of Environment and Local Government.