



**WINNIPEG
Air Testing**

Practical Health and Safety Solutions

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Noise Mapping Quotation

The province of Manitoba has regulations and guidelines to prevent noise-induced hearing loss in the workplace. These requirements start as low as 80 decibels. Employers are required to comply with the various requirements of the legislation, including noise monitoring.

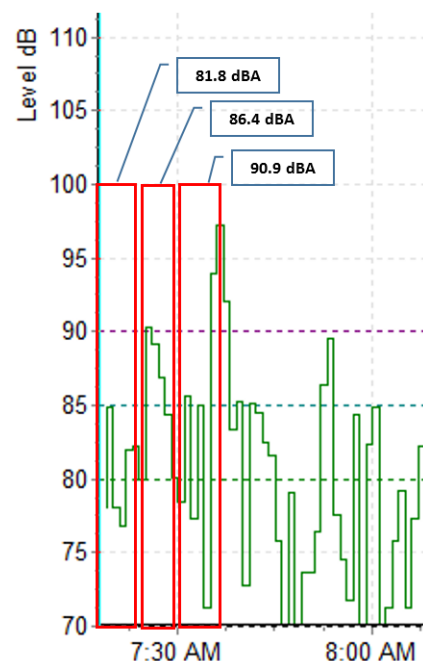
Sampling Procedure

Noise mapping involves taking measurements at various locations throughout the facility. This shows areas that may be above the level where hearing protection is required. It is also useful in evaluating high noise areas that are perhaps infrequently occupied, such as compressor rooms.

Most area mapping surveys involve using a hand-held noise meter and walking through the plant. The investigator stands for a couple of minutes in a location and estimates the noise exposure from looking at the noise meter. This provides 2 types of error.

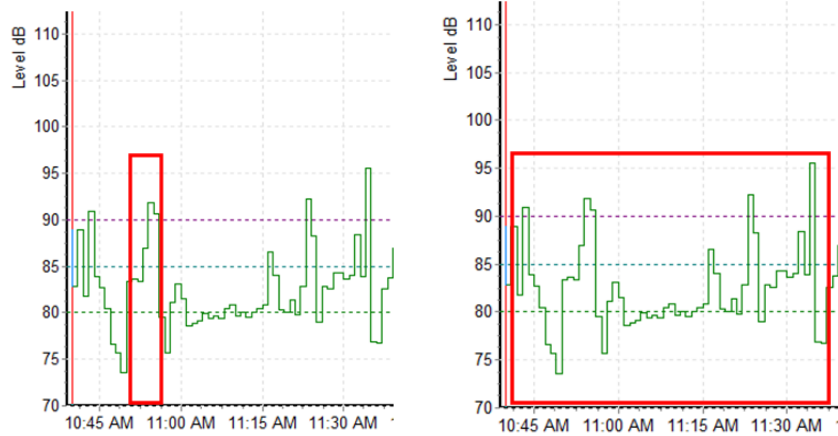
Firstly, the number displayed on the noise meter bounces around. It is not uncommon for the numbers to vary by a factor of 5 dBA or more from second to second. It can be difficult to average those numbers mentally – especially because the numbers are logarithmic in nature so readings of 80 dBA and 82 dBA do not average to 81 dBA.

Secondly, how representative is a sample taken over a few minutes? Looking at noise graphs from full-day noise surveys, it is apparent that noise levels from adjacent 5-minute periods can vary significantly (see graph on the right). So, which 5 minutes was the noise measurement taken from? And what confidence would you have that any five-minute sample is representative of the noise level for that area?



Winnipeg Air Testing performs noise mapping by placing a noise dosimeter in an area for a period of 30 minutes. This gives an average noise level for an area over a longer period of time than spot measurements and provides a more accurate reading. And when using 10 noise dosimeters, 10 30-minute area samples can be collected in the same time as spot measurements in 10 locations.

Which sampling period gives a better representative sample of the noise level in this area? The five-minute sample on the left or the 30-minute sample on the right?



Report

The results are provided in a comprehensive report that provides the methodology, the locations tested, each noise level, and any recommendation arising from the sampling results and observations in the field.

If you have any questions or would like to receive a quotation for this service, please contact us at your convenience by phone at (204) 668-3141 or by email at contact@winnipegairtesting.com.

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