



Acceptable Air Sampling Equipment for Enclosed Sports Arena Rule (4620.4500)

Environmental Health Division
Indoor Air Unit

Pump and Tube

Minnesota Rules, part 4620.4500, subpart 2, specifies that gas detector tubes are an acceptable method of measuring air quality conditions. The gas detector tube systems listed below meet the Enclosed Sports Arena Rule requirements.

Manufacturer	Pump (commonly used)	Carbon Monoxide Tube	Nitrogen Dioxide Tube
Drager	Accuro	CH 25601	CH 30001
Gastec (NexTeq)	800, GV-100	1La	9L
Kitigawa (Sensidyne)	AP-20	106S	117SB
MSA	Kwik-Draw	CO-5 Part# 803943	NO2-0.5 Part#487341

Portable Electronic Instruments

Written approval must be obtained from the Minnesota Department of Health before using an electronic air monitoring device for compliance with the Rule. Contact John Olson (651-201-4614 or john.d.olson@state.m.us).

MDH requires, at a minimum, the following information, in writing.

1. Name and manufacturer of instrument
2. Testing range for carbon monoxide and/or nitrogen dioxide
3. Testing resolution (a.k.a. increments)
4. Maintenance and calibration schedule, as specified by manufacturer (i.e., according to owner’s manual)

MDH is aware of the following manufacturers of portable electronic instruments:

- BW Technologies, Drager, Gray Wolf Sensing, Honeywell Analytics, Industrial Scientific, MSA, and RAE Systems.

Instruments and their local vendors can usually be found on the instrument manufacturers’ websites, or by searching for Minnesota industrial safety supply vendors. Individual single gas monitors for CO and NO2 may be acceptable as well as multi-gas monitors that have both sensors in one instrument. MDH suggests comparing manufacturer specifications for maintenance and calibration because this varies considerably from one instrument to another.

MDH recommends against the use of portable electronic instruments that automatically ‘zero-calibrate’ to the ambient air whenever the instrument is turned on. A few instruments are not specified for sub-freezing temperatures; these should not be used unless the arena can provide assurance that temperatures at board height of the arena are above freezing.

Continuous Monitoring Systems

Continuous monitoring systems that are installed at a fixed location **may** be approved. Written approval must be obtained by MDH. Since continuous monitoring systems are an emerging technology and the particular installation differs by arena, MDH will evaluate each request on a case-by-case basis. For more information, contact John Olson.