



## Microbiology Sampling Protocols

### SanAir Technologies Laboratory Air-O-Cell Cassette Sampling Method

This is a list of procedures included for your convenience. Following these procedures ensures SanAir quality and accuracy of analysis. \*\* A representative outdoor sample and field blank for each job must be provided for proper analysis of indoor air quality samples.

- 1) One air cassette should be used for each site, but additional cassettes may be used for more accurate results.
- 2) Using a permanent marker, write a unique sample number on the side of the cassette.
- 3) Once you are ready to sample, remove the tape from the inlet and the outlet orifice and connect the cassette to the pump tubing using the included adapter.
- 4) The flow rate of your pump must always be calibrated to 15 L/min using a rotameter. Any rate lower than 15 L/min. will decrease the amount of particulate impacted onto the air cassette. The following figure will help you determine the best sampling time for each site.

Site Location	Sampling Duration	Total Volume
Outside	5 Minutes	75 L/min.
Complaint Area With Suspected High Levels of Particulate	4 Minutes	60 L/min.
Complaint Area	5 Minutes	75 L/min.
Non-Complaint Area	5 Minutes	75 L/min.
Wall Checks	< 2 Minutes	Up To 30 L/min.

- 5) Once you have determined the appropriate sampling duration, switch the pump on.
- 6) Once you have sampled, turn off the pump, remove the cassette from the tubing, and replace the tape over the inlet and outlet orifices of the cassette.
- 7) Write the sample information and sampling flow rates on the Chain of Custody.
- 8) Sample the remaining sites, following steps 2-7 for each cassette.
- 9) Make sure the package used for shipping is well cushioned to avoid breakage during shipping.



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## **SanAir Technologies Laboratory Micro 5 Air Cassette Sampling Method**

This is a list of procedures included for your convenience. Following these procedures ensures SanAir quality and accuracy of analysis. \*\* A representative outdoor sample and field blank for each job must be provided for proper analysis of indoor air quality samples.

- 1) One air cassette should be used for each site, but additional cassettes may be used for more accurate results.
- 2) Using a permanent marker, write a unique sample number on the side of the cassette.
- 3) Calibrate the high volume pump to 5 L/min using a rotameter.
- 4) Remove the black pin from the bottom of the Micro 5 cassette and connect it to the pump tubing.
- 5) Remove the large black cap from the cassette and turn on the pump.
- 6) Once the sampling duration of 5 minutes has been met, turn off the pump, and remove the Micro 5 cassette from the tubing. Immediately following the collection of an air cassette, replace both the black pin and the large black cap.
- 7) Write the sample information and sampling flow rates on the Chain of Custody.
- 8) Sample the remaining sites, following steps 2-7 for each cassette.
- 9) Make sure the package used for shipping is well cushioned to avoid breakage during shipping.



## SanAir Technologies Laboratory Cyclex d Cassette Sampling Method

This is a list of procedures included for your convenience. Following these procedures ensures SanAir quality and accuracy of analysis. \*\* A representative outdoor sample and field blank for each job must be provided for proper analysis of indoor air quality samples.

- 1) One air cassette should be used for each site, but additional cassettes may be used for more accurate results.
- 2) Using a permanent marker, write a unique sample number on the side of the cassette.
- 3) Calibrate the high volume pump to 20 L/min using a rotameter.
- 4) Remove the blue pin from the bottom of the Cyclex d cassette and connect it to the pump tubing.
- 5) Remove the red cap from the cassette and turn on the pump.
- 6) The sampling duration may be lowered in heavily contaminated areas. The following figure may be used as a guide for the determination of sampling duration based on the suspected level of contamination.

<b>Site Location</b>	<b>Sampling Duration</b>	<b>Total Volume</b>
Outside	10 Minutes	200 L/min.
Complaint Area With Suspected High Levels of Particulate	5 Minutes	100 L/min.
Complaint Area	5-8 Minutes	100-160 L/min.
Non-Complaint Area	10 Minutes	200 L/min.

- 7) Once you have sampled, turn off the pump, and replace both pins.
- 8) Write the sample information and sampling flow rates on the Chain of Custody.
- 9) Sample the remaining sites, following steps 2-8 for each cassette.
- 10) Make sure the package used for shipping is well cushioned to avoid breakage during shipping.



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## **SanAir Technologies Laboratory Andersen Sampling Method**

This is a list of procedures included for your convenience. Following these procedures ensures SanAir quality and accuracy of analysis. \*\* A representative outdoor sample and field blank for each job must be provided for proper analysis of indoor air quality samples.

1. Use one set of plates per sample site.
2. When unwrapping the plates for each site, take care not to open the plates to avoid contamination.
3. Using a permanent marker, write on THE BOTTOM EDGE OF EACH PLATE (not the lid!) a unique sample number.
4. Once you are ready to sample, remove the lid from one plate and place it in the Andersen unit. ONLY remove the lid of a plate if you are READY to sample. This avoids contamination.
5. The recommended sampling time is five minutes at 28.3 L/min for the Andersen unit. If your sampling pump draws more or less than this amount simply modify the sampling time to approximate 140 liters of air sampled. Once you have sampled, stop the pump, remove the plate and immediately replace the lid. Tape the plate shut! Make sure your sampling flow-rate and time sampled are included on the Chain of Custody.
6. Inoculate the remaining plates in the sample site, following steps 3-5 for each type of plate. Tape all plates for one site together and store them upside down (lid down). For best results, plates should be shipped within 24 hours of sampling, or otherwise kept in a refrigerated unit until they are shipped (lid down). This ensures that condensation that may be present on the lid does not drip onto the agar surface, which may skew results.
7. Make sure the box or cooler is packed well with sufficient cushioning to avoid plate breakage during shipping. When using a cooler use only chemical cooling packs, ice is not recommended as it will melt and seep into the plates.

## SanAir Technologies Laboratory, Inc.

*IAQ Microbiology Services*

1551 Oakbridge Drive, Suite B  
Powhatan, VA 23139  
www.sanair.com

Phone: 888.895.1177  
Phone: 804.897.1177  
Fax: 804.897.0070



### **SanAir Technologies Laboratory Bulk Sampling Method**

This is a list of procedures included for your convenience. Following these procedures ensures SanAir quality and accuracy of analysis.

1. On the Chain of Custody, write the following information:
  - Site Location
  - Sample Number
2. Bulk samples may be analyzed by direct or culture methods, please provide sufficient material for analysis. Typically between 5-15 grams for culture analysis is acceptable, for direct ID provide 1-2" surface area.
3. Label resealable bags with the sample number, placing one sample in each bag.



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### **SanAir Technologies Laboratory Swab Sampling Method**

This is a list of procedures included for your convenience. Following these procedures ensures SanAir quality and accuracy of analysis. A field blank should accompany every job.

1. Use one swab per sample site.
2. Using a permanent marker, write a unique sample number on the side of the swab.
3. Once you are ready to sample, remove the cap with the attached swab being careful not to touch the tip or the shaft of the swab. This avoids contamination.
4. Squeeze the bottom of the tube to release the transport medium from the sponge. Insert the swab into the tube to moisten the cotton tip. Swab the desired area using a rolling motion.
5. The recommended swab area is one to four square inches. Make sure the area sampled is included on the Chain of Custody. Once finished, place the swab back into the tube making sure the tip comes in contact with the transport medium in the bottom of the tube.
6. Make sure the box is packed well with sufficient cushioning to avoid breakage during shipping. For best results, swabs should be shipped within 24 hours of sampling.

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Fax: 804.897.0070



### **SanAir Technologies Laboratory Tape Sampling Method**

This is a list of procedures included for your convenience. Following these procedures ensures SanAir quality and accuracy of analysis.

1. Use crystal clear packing tape (NOT scotch, duct, masking or other).
2. On the Chain of Custody, write the following information:
  - Site Location
  - Sample Number
3. Once you are ready to sample, cut a 2" piece of tape, bowing the tape between your fingers (being careful to just handle the edges), apply the tape to the desired sampling surface.
4. Stick the tape to the inside of a resealable bag labeled with the sample number. DO NOT fold the tape onto itself.



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### **Bio-Tape Sampling Method**

1. Remove the slide from the plastic slide box.
2. Write the sample number/location on the slide's label.
3. Peel off the protective liner from the slide to expose the adhesive.
4. Place the slide adhesive side down on the surface to be sampled.
5. Gently press down to ensure contact is made.
6. Carefully remove the slide from the surface area and place it back into the plastic container.

Note 1: Be sure to write the sample information on the slide itself. If the plastic slide container is not closed properly the slide will come out of the container.

Note 2: Do not replace the "peel here" covering on the slide. The ink from the words can remain on the sticky surface obscuring the sample.