

IAQ Home Survey<sup>TM</sup>

IAQ Commercial Survey<sup>TM</sup>

# Sample Collection Certification

Home Inspectors & Indoor Air Quality Professionals

# Prism Terms and Phrases

- ▶ **IAQ Home Survey™**
  - ▶ A low cost VOC survey
  - ▶ Report includes the Total Volatile Organic Compounds (TVOC)
  - ▶ Report includes the Total Mold Volatile Organic Compounds (TMVOC)
  - ▶ Report includes Contamination Index (Predicts possible material source of VOCs)
  - ▶ Report includes Significant VOCs
  - ▶ Report includes EPA Hazardous Air Pollutants
- ▶ **Sample Collection Media Tube**
  - ▶ A ¼ inch OD glass tube that holds the absorbent material
- ▶ **Encapsulation Tube**
  - ▶ A 3/8 inch OD glass tube that holds the Sample Collection Media Tube
- ▶ **COC – Chain of Custody**
  - ▶ Contains all sample information including how & when it was collected

# Certificate Information

- ▶ This Presentation will provide you all the information needed to collect a viable IAQ Survey sample
  - ▶ Read the following documentation
  - ▶ Complete the 30 Questions at the end and submit to Prism
  - ▶ 80% correct is required to gain Sampling Certification
  - ▶ A Certificate will be emailed to you from Prism
- ▶ There is no cost for this online certification
  - ▶ You can retake the test after 1 week to gain Sampling Certification
- ▶ Thank you for using IAQ Home & Commercial Survey

# Sampling Parameters

## ▶ Test Parameters

- ▶ Outside windows and doors
  - ▶ Should ideally be closed for a minimum of 24 hours before test is performed
- ▶ If windows and outside doors are open
  - ▶ Close them and wait approximately 30 to 60 minutes before starting test
  - ▶ A shorter test is fine, if you must wait to start
  - ▶ Note on report that windows and doors were open when you arrived
- ▶ Indoor temperature should be between 60 - 80° F
  - ▶ This is the temperature range for most homes & buildings
  - ▶ Lower temperatures can cause VOCs to condense and produce low reading
  - ▶ Higher temperatures might cause a slightly higher TVOC reading
- ▶ All inside doors should be open
  - ▶ They can be opened when you arrive

# Sample Parameters (continued)

- ▶ Test Parameters (continued)
  - ▶ HVAC running if available (not required)
    - ▶ Mold growth in HVAC system more likely picked up with fan running
    - ▶ Fan will further mix chemicals so one test can be done on entire building
  - ▶ Cabinetry and Vanities
    - ▶ Cabinetry around sinks can be opened if you are concerned about hidden mold
  - ▶ The atmospheric pressure is not important
    - ▶ The sampling pump will draw the same flow at all atmospheric pressures
  - ▶ Cooking with frying oil should be discouraged the day before the test
  - ▶ Additional sample collection for multi-level buildings is encouraged
    - ▶ If there is an environmental concern about mold or other chemicals
    - ▶ If there is no or limited air movement between the spaces
  - ▶ The building should not have been painted within the last week
    - ▶ If the sample is collected within a week of painting the VOC will be dominated by paint

# Sample Location

- ▶ IAQ Home & Commercial Survey Tests are designed for a maximum of 2,000 sq. ft. per sample tube
- ▶ Place sampler near center of first floor
- ▶ Place sampler near center of basement/additional level
  - ▶ If additional test is requested
- ▶ Place sampler in attic
  - ▶ If there is a concern about mold from leaking roof
- ▶ No requirement for outdoor air sample

# Media Preparation

- ▶ To prepare sample media use the following process
  - ▶ Check the expiration date on the encapsulating tube
    - ▶ If it is past the date on the tube, return to Prism for replacement
  - ▶ Break the encapsulating tube with the sample tube at the other end
    - ▶ See sample instructions in TB 602 for proper technique
    - ▶ Remove the glass wool plug. The sample tube should now easily slide out.
    - ▶ Be careful with the tube, it will break if it hits the floor
  - ▶ If you happen to break a tube
    - ▶ Note the number of the tube and notify Prism
    - ▶ Discard the tube, pieces and all the adsorbent contents in a trash container
    - ▶ The adsorbent material is non-toxic but it is difficult to get off fabric
  - ▶ Identify the arrow on the sample media tube
    - ▶ The arrow should point towards the sampler for correct sample flow



# Sample Pump Preparation

- ▶ To certify pump operation use the following procedure
  - ▶ Turn the pump on before using
    - ▶ Confirm LED - Light Emitting Diode is on
    - ▶ Confirm you can hear the pump turn on
  - ▶ The sample pump has holes on the side for battery checking
    - ▶ Check battery voltage every so often, daily, weekly or monthly
    - ▶ **Check the batteries only with the pump in the off position**
    - ▶ New batteries should last about 100 hours or 50 runs
    - ▶ Batteries voltage should be greater than 4.5 VDC (B-Series) or 3.5 VDC (C-Series) for proper operation
      - ▶ The pump flow should run at 200 ml/min when voltage is greater than 4.5B/3.5C VDC
  - ▶ Pump should be returned to Prism every 6 months to 1 year for flow recertification





# Chain of Custody Form

- ▶ All information and observations should be added to the Chain of Custody form as observed or performed
  - ▶ Fill in information block
    - ▶ Professional Company Name, Professional Name and Contact Info
    - ▶ Address of sampling location
  - ▶ Fill in sample identification block
    - ▶ Location and Date collected
    - ▶ Test requested
      - ▶ A2-IAQHSI, A2-IAQHSP, A14-IAQHSF; A2-TSC
      - ▶ A2-IAQCSI, A2-IAQCSP, A14-IAQCSF
    - ▶ Start and Stop time
      - ▶ No requirement to calculate total flow, unless a non Prism sampling pump is utilized
  - ▶ Special handling requests
  - ▶ Custody release

# Sample Collection

- ▶ To initiate sample collection use the following process
  - ▶ Refer to Prism Tech Bulletin 602 for any clarification
  - ▶ Insert sample collection media tube into the pump
    - ▶ The arrow on the collection media tube should point towards pump
  - ▶ Turn sample collection pump on
    - ▶ Note **Start time** on the COC - Chain of Custody
  - ▶ Collect sample
    - ▶ A2 tube - 1 hour minimum (requirement for MVOCs detection limits)
    - ▶ A2 tube - 2 hours ideal - 24 L of sample
    - ▶ A2 tube - 4 hours recommended maximum
    - ▶ A14 tube - 20 minutes (30 minute recommended maximum Formaldehyde analysis only)

# Sample Collection (continued)

- ▶ IAQ Home and Commercial Survey™ Samples
  - ▶ Use Standard tri-matrix tubes (all dark grey sorbent material inside the sample tube) for IAQ Home Survey VOC tests
    - ▶ The recommended test time is 2 hours for VOC tests
  - ▶ Use Standard tri-matrix tubes (all dark grey sorbent material inside the sample tube) for IAQ Commercial Survey VOC tests
    - ▶ The recommended test time is 2 hours for VOC tests
- ▶ IAQ Home and Commercial Survey Formaldehyde
  - ▶ Use the Formaldehyde specific tube (some white sorbent material inside the sample tube) for all Formaldehyde tests
    - ▶ The recommended test time is 20 minutes for Formaldehyde tests

# Sample Collection (continued)

- ▶ To end sample collection use the following process
  - ▶ Turn sample collection pump off
    - ▶ Note **Stop time** on COC - Chain of Custody
  - ▶ Cap sample collection media with red caps
  - ▶ Place sample collection media into 2 pc. plastic transport tube
    - ▶ Tube should fit snugly into tube when two pieces are pressed together
  - ▶ Sample tube requires no refrigeration
    - ▶ Be careful however not to leave collected sample in a hot vehicle over 100° F
      - ▶ Some volatile species could be lost if temperature gets too high
    - ▶ If high temperatures are expected a cooler can be used but do not allow media to come into direct contact with ice blocks or packaged freezer packs
      - ▶ Use paper towels or some fabric to prevent contact with the cooling material
  - ▶ Complete COC and return to Prism Analytical Technologies

# Observations

- ▶ Observations are valuable to all analytical techniques
  - ▶ Place all observations on the COC - Chain of Custody form
  - ▶ Odors
    - ▶ Note any odors that you notice as you enter the building
    - ▶ Odors will seem to dissipate over time as your nose gets accustomed to odor
    - ▶ New paint, carpeting or furniture smell, animal odors, sewer gas odors, etc.
  - ▶ Windows and doors
    - ▶ Were they open or closed upon arrival
  - ▶ New paint, carpeting, etc.
  - ▶ Gas cans in attached garage or storage
  - ▶ Fragrances placed in area
    - ▶ Potpourri, plug ins, wicking solutions
  - ▶ Mold like substances on walls and surfaces

# Returning Sample to Prism

- ▶ Recommended Sample Media Shipping Practices
  - ▶ Place the sample tube with plastic transport tube into the foam shipping sleeve
  - ▶ Place shipping sleeve into hard cardboard shipping tube
  - ▶ Cap end of shipping tube with white plastic cap
  - ▶ Do not place shipping label directly on the shipping tube
    - ▶ To reduce waste, cardboard tubes are reused
    - ▶ Cardboard tubes can not be reused if shipping label is affixed
    - ▶ Shipping with label directly on cardboard tube may result in the small package becoming lost during transit or possibly destroyed if the white end cap comes loose
  - ▶ Shipping tube along with completed COC can be placed in following
    - ▶ Small Priority box from Post office - least costly 2 to 3 days delivery
      - ▶ No delivery confirmation without additional costs
    - ▶ Next day shipment from UPS or FedEx
      - ▶ Delivery confirmation available
      - ▶ Can use envelope or box, the cardboard tube with cap will protect sample

# Customer Questions

- ▶ Prism's preferred method of interacting with your customers
  - ▶ We request that **you** be the primary contact with your own customers
  - ▶ Questions from your customers regarding the results of their analysis should be **emailed by you** to Prism at [prism@pati-air.com](mailto:prism@pati-air.com) or [s.mack@pati-air.com](mailto:s.mack@pati-air.com)
  - ▶ If you need immediate assistance and would rather not email the question, please call:
    - ▶ Sarah Mack
      - ▶ Office (989) 772-5088 (Eastern Time Zone)
      - ▶ Cell (989) 506-7303 (Eastern Time Zone)
  - ▶ If our email or phone discussion with you still does not reconcile your customer's issues, we, with your permission, will discuss the results with your customer (permission must be provided via writing - email, letter, or on COC)

Thank you!

Prism would like to thank you for using IAQ Home & Commercial Survey. Contact us any time if you have issues with sample collection. Feel free to download this presentation as a reference document.

[www.pati-air.com](http://www.pati-air.com)



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