

## Window & Door Samples for VOC Emission Testing – Sample Collection, Preparation & Shipping

### BkA Guide 21-01.0

#### June 2021

#### Introduction

Refer to BkA Guide 10-03 for general instructions on the collection, preparation, and shipping of samples for VOC emission testing by *CDPH/EHLB/Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.2, 2017* (accessible at <https://www.berkeleyanalytical.com/resources/test-methods>). Window and door samples have preparation requirements that are related to the test chambers used to perform the VOC emission testing. Berkeley Analytical uses one-cubic meter (1-m<sup>3</sup>) chambers for window samples and for door samples that include a frame. Door samples without a frame are tested in 67-L chambers. Please follow the sample preparation instructions below for the type of product that is to be tested. Should you have any questions, please contact us at **510-236-2325** or email [info@berkeleyanalytical.com](mailto:info@berkeleyanalytical.com).

#### Sample Collection

Collect samples of windows and doors directly from production. The production date for the purpose of the test is the date the window or door is first ready to be shipped from the production site. Enter this date as the production date on the Chain-of-Custody (COC) form. Immediately after production, cut and prepare the sample as described in the appropriate section below. Then, immediately wrap the sample in two layers of kitchen-grade, heavy-duty aluminum foil to preserve the sample and to prevent external contamination.

#### Sample Preparation – Product-specific Instructions

##### 1. Commercial-Use Windows with Frame and Sash (all types)

Prepare a representative corner section of a production window including the frame and the sash. The sample shall have a width-to-height ratio of 1:1. The width or height dimension shall be approximately 24 inches (approx. 60 cm) measured at the frame perimeter. The glazing may be either rectangular or cut on an angle to form a right triangle. Include all weather stripping and sealants.

##### 2. Residential-Use Windows with Frame and Sash (all types)

Produce a complete representative small window including the frame, sash, glazing, weather stripping, and sealants. The size of the sample window shall not exceed 24 inches by 36 inches (approx. 60 cm by 90 cm) measured at the frame perimeter. The projected planar area of one side of the window shall not be less than 4 ft<sup>2</sup> (approx. 0.37 m<sup>2</sup>).

Alternately, prepare a representative corner section of a production window including the frame and sash. The sample shall have a width-to-height ratio of 1:1. The width or height dimension shall be approximately 24 inches (approx. 60 cm) measured at the frame perimeter. The glazing may be either rectangular or cut on an angle to form a triangle. Include all weather stripping and sealants.

##### 3. Exterior Entry Doors with Sill and Frame – Slab, Paneled, etc.

Cut a representative bottom corner section of a production door including the door, sill, and frame. The rectangular door sample shall have a width-to-height ratio of 1:3. The width shall be approx. 12 inches (approx. 30 cm) and the height shall be approx. 36 inches (approx. 90 cm). Include all weather stripping and sealants.

**4. Exterior Patio Doors with Sill and Frame – Sliding or Hinged**

Prepare a representative bottom corner section of a production door. The door sample shall have a width-to-height ratio of 1:3. The width shall be approx. 12 inches (approx. 30 cm) and the height shall be approx. 36 inches (approx. 90 cm). The glazing may be either rectangular or cut on an angle to form a right triangle. Include the sill and the door frame cut to the same width-to-height ratio. Include all weather stripping and sealants.

**5. Exterior Doors without Sill and Frame – Wood, Fiberglass, Metal, etc.**

Cut two identical corner sections of a production door with a width-to-height ratio of 1:2. Each section shall be 6 inches wide by 12 inches high (approx. 15 cm by 30 cm). Communicate to the Lab which is the exterior face of the door.

**6. Interior Doors without Sill and Frame – Wood, Fiberglass, Metal, etc.**

Cut two identical corner sections of a production door with a width-to-height ratio of 1:1. Each section shall be 6 inches wide by 6 inches high (approx. 15 cm by 15 cm).

**Shipping**

Label the aluminum foil-wrapped sample on the outside so that the sample can easily be identified. The sample can be further wrapped in a clear polyethylene bag. Then, carefully package the sample in a cardboard box or other shipping container so that the sample will not be damaged during shipping. Typically, only one sample should be placed in a shipping container. Include a signed copy of the COC with the shipment. Ship the sample within 24-hours of production to meet the requirements of the CDPH standard. The sample can be shipped by either air freight or ground transportation to the address given below.

**Shipping Address for Building Product Samples:**

Berkeley Analytical  
Attn: Sample Custodian  
815 Harbour Way South, Unit 6  
Richmond, CA 94804  
Ph: 510-236-2325

END OF GUIDE