

# BioVOC-2



## Instruction for use

### PRODUCT REFERENCE:

BioVOC-2 breath sampler, pk 1	C-BI002-01
BioVOC-2 breath sampler, pk 10	C-BI002-10
BioVOC-2 breath sampler, pk 100	C-BI002-100
Disposable cardboard mouthpieces, suitable for BioVOC-2, pk 100	C-B100M



## 1. Introduction

BioVOC-2 is a breath sampler that captures a portion of expiratory breath for transfer to sorbent tube for subsequent analysis using thermal desorption (TD)-gas chromatography (GC).

## 2. Components

BioVOC-2 comprises 6 components:

- [1] The BioVOC-2 body.
- [2] The cap.
- [3] The plunger, with plunger tip.
- [4] A bung.
- [5] A disposable cardboard mouthpiece.
- [6] A non-return valve (located within body).



The following items will also be required, but are not supplied with the BioVOC-2:

- Conditioned sorbent tubes.
- Storage caps (C-CF020).
- CapLok™ tool (C-CPLOK).

### 3. Using the BioVOC-2

- [1] Place the disposable cardboard mouthpiece over the nozzle of the BioVOC-2 cap and provide the BioVOC-2 to the subject.



*Step [1] attaching mouthpiece*

- [2] The subject should exhale into the sampler, according to the modalities fixed by the study protocol (e.g. normal exhalation, forced exhalation, breath holding etc.).



*Step [2] Sample collection*

- [3] After sample collection, remove the mouthpiece and place the bung into the tip of the BioVOC-2 body. Ensure to do this as quickly as possible to minimise loss of sample and prevent diffusive ingress of air into the BioVOC-2 body.

- [4] Attach the plunger to the end of the non-return valve, ensuring the plunger tip is in position.



*Step [4] Inserting plunger*

- [5] Remove the long-term storage caps from the conditioned sorbent tubes using the CapLok tool.



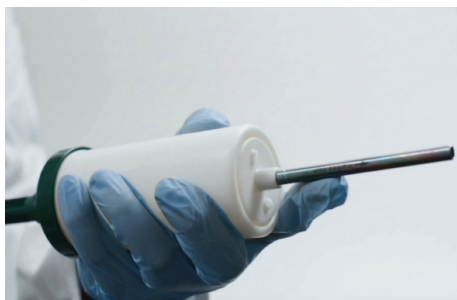
*Step [5] Removing storage caps*

- [6] Remove the bung and attach the sampling end of the sorbent tube to the tip of the BioVOC-2 body, so that the sampling arrow is pointing away from the BioVOC-2.



*Step [6] Inserting tube*

- [7] Push the plunger steadily through the length of the BioVOC-2 to displace the trapped air sample onto the tube. This should take approximately 10 seconds.



*Step [7] Transferring sample*

- [8] Wait 5 seconds and remove the sorbent tube from the end of the sampler.

- [9] Using the CapLok tool, seal the tube with long-term storage caps to secure your sample for short-term and long-term storage.



*Step [9] Capping tube*

- [10] Once the tube is sealed, flush the BioVOC-2 by pulling and pushing the plunger in and out three times. Return the piston to the end cap ensuring the non-return valve sits securely within the cap and unscrew the plunger.
- [11] If the study protocol requires, you are now ready to take a repeat sample. To do this, place a new disposable mouthpiece over the nozzle of the BioVOC-2 cap, provide the sampler to the subject, and repeat as before. Please note that sampling can also be repeated onto the same tube.
- [12] Once your repeat sample tube is sealed, you are ready for analysis.

**NOTES** Whilst BioVOC-2 is considered disposable, it can be used multiple times for the same patient during a single sampling sitting – just ensure to replace the mouthpiece each time.

## 4. Specifications

Part Number	Description
C-BIO02-01	BioVOC-2, pk 1
C-BIO02-10	BioVOC-2, pk 10
C-BIO02-100	BioVOC-2, pk 100
C-B100M	Cardboard mouthpieces, pk 100

BioVOC-2 volume

- Volume of BioVOC-2 body: 129 mL

Compatible tube types

- Any industry-standard 3½" x ¼" sorbent tube

## 5. Contact details

For technical support, please contact your supplier in the first instance. If they are unable to resolve your query, please contact Markes International's service department:

**E:** [support@markes.com](mailto:support@markes.com)

**T:** +44 (0)1443 230935

**W:** [www.markes.com](http://www.markes.com)

For an instructional product video, please visit:  
[chem.markes.com/BioVOC-2](http://chem.markes.com/BioVOC-2)



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