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SALIVA COLLECTION INSTRUCTIONS: SALIMETRICS ORAL SWAB (SOS)

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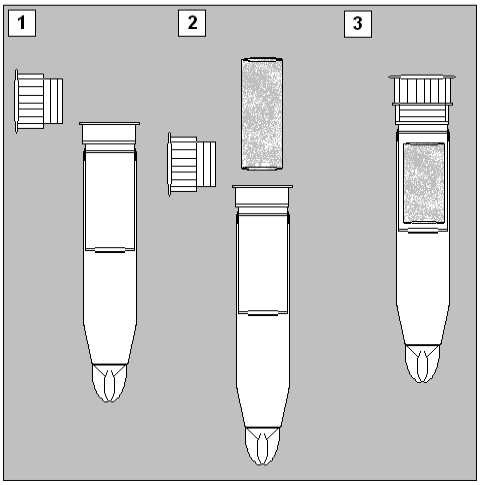
(Item No. 5001.02)

Approved for collection of saliva for analysis of cortisol, alpha-amylase (sAA), chromogranin A (CgA), cotinine, C-reactive protein (CRP), Interleukin-1 beta (IL-1β), Interleukin-6 (IL-6), melatonin, secretory IgA (SIgA), testosterone and DNA

When used properly, the SOS is an ideal saliva collection tool for participants ages 6+. Under ideal circumstances collecting saliva for 1-2 minutes yields approximately 1 mL of usable sample. *Refer to chart on next page for recommended SOS placement in the mouth.*

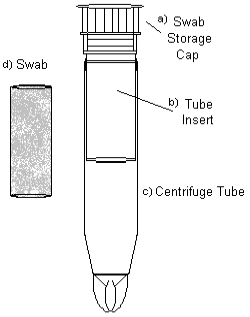
CAUTIONS:

- ***Use only as directed***.
- *This device is not sterile*.
- *This device is not a toy and is intended for collection of saliva.*
- *Do not use this device for children under the age of 6.*
- *A copy of this instruction sheet must be distributed to each device user.*
- *Store out of the reach of children.*



Supplies Needed

- Salimetrics Oral Swab (Item No. 5001.02)
- Swab Storage Tube (Item No. 5001.05)
- Bar-coded labels (Item No. 5007.00)
- 4" swab storage tubes boxes (Item No. 5023.00)
- Optional: 5cc syringe (Item No. 5015.02)
- Optional: 2 mL cryovials (Item No. 5002.01)

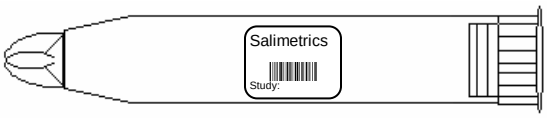


Sample Collection Instructions

1. Peel back protective packaging and remove SOS. Place SOS in mouth as directed in table on next page. Keep in place for 1-2 minutes. (If collecting from the parotid glands in the cheek, saliva flow will be lower, and collection time should be extended for up to 5 minutes to ensure adequate volume.) Remove cap from SST.
2. Remove SOS from mouth and place into SST tube insert.

   Note: *If the SST is not used or if centrifugation is not available, saliva from the swab may be expressed into a 2 mL cryovial using a needle-less 5 or 10cc plastic syringe.*
3. Replace cap and snap securely onto tube.
4. Label the exterior of the tube using computer-generated, bar-coded labels provided by Salimetrics, or waterproof pen. (Position label so that the barcode lies horizontally along the length of the swab storage tube.)

   Note: *Use labels recommended for freezing (cryolabels), not ordinary paper labels.*



5. If samples cannot be frozen immediately, refrigerate or keep cool using insulated container with ice packs.
6. We recommend freezing samples at or below -20°C within 2 hours of collection. Freeze-thaw cycles should be minimized for some analytes. Contact Salimetrics for details.
7. On the day sample are to be assayed, thaw tubes at room temperature. Centrifuge for 15 minutes at approximately 3,000 RPM (1500 x g). After centrifugation, the tube insert and swab may be discarded, but keep the cap. Assays should be performed using only clear saliva, avoiding any sediment that may have accumulated (see note below).

Note: If samples may be used for DNA analysis *at some point, the swabs should be saved along with the filtrate since they may retain cells that contain DNA. Swabs and tube inserts may be left inside the SST after centrifugation and frozen for storage.*

8. Re-centrifuge tubes following each freeze-thaw cycle, as additional precipitates may develop upon refreezing.
9. It is recommended that tubes be organized into swab storage boxes (7x7 grids, 49 tubes) before shipping to the testing lab. If a swab storage box is used, **place tubes in storage box cap side up.**

Recommended SOS Placement	
cortisol, cotinine, testosterone, melatonin	Under front of tongue
α-amylase* (with other analytes)	Under front of tongue
α-amylase* (alone)	Between cheek and gum (near upper 2nd molar)
SIgA†, CRP†	Placement may vary depending on focus of research
chromogranin A‡, IL-1β‡, IL-6‡	Recommend under front of tongue
DNA	Under front of tongue

* Saliva from the parotid glands has higher concentrations of α-amylase than pooled whole saliva from under the tongue.
†Concentrations may vary depending on location in the mouth. Contact Salimetrics for further details.
‡Effect of mouth location not yet determined.

Notes

- Localized secretions from specific areas in the mouth can affect results for analytes such as SIgA and alpha-amylase. ***We therefore recommend that the swab should not be moved around in the mouth***.
- SIgA levels are influenced by the saliva flow rate. Many other salivary analyses are influenced by saliva flow rate. For instance, alpha-amylase, CRP, IL-1β and IL-6 may also be similarly affected. For these analytes we advise recording the length of time the swab is in the mouth, and weighing the swab in the storage tube before and after collection, in order to estimate the saliva flow rate. This information can then be used to express the assay results as a secretion rate (units/minute). In order for the flow rate estimate to be accurate, however, the swab must be removed from the mouth before it reaches saturation. (The average maximum volume is 2 mL.) Contact Salimetrics for more details.
- *The SOS is made from an inert material that should theoretically pose no problem to specimens stored frozen in the device. Studies of long-term storage at temperatures of -20°C or colder have shown no change in analyte stability over a period of two years. Nevertheless, before storage for periods longer than two years we recommend that the specimen be removed from the SOS by centrifugation or compression.*
- *SOS may cause temporary dryness of mucosal membrane or oral cavity.*
- *Contact us for test subject preparation at* support@salimetrics.com
- *Investigators using saliva samples collected with the SOS device for biomarkers other than those approved by Salimetrics do so at their own risk.*

References

Harmon, A., et al. (2008). Differences in saliva collection location and disparities in baseline and diurnal rhythms of alpha-amylase: A cautionary note. *Horm Behav, 54*(5), 592-96.

Granger, D. A., et al. (2007). Integration of salivary biomarkers into developmental and behaviorally-oriented research: Problems and solutions for collecting specimens. *Physiol Behav, 92(*4), 583-90.

Harmon, A., et al. (2007). Measuring salivary cortisol in studies of child development: Watch out–What goes in may not come out of commonly used saliva collection devices. *Develop Psychobiol, 49*(5), 495-500.

Whembolua, G-L., et al. (2006). Bacteria in the oral mucosa and its effects on the measurement of cortisol, dehydroepiandrosterone, and testosterone in saliva. *Horm Behav, 49*(4)*,* 478-83.

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