

Saliva: Measuring Tools and Methods

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Advantages: Non-invasive, drug monitoring, biological markers, early disease detection.

Disadvantages: Inconvenient to the subject, circadian variability of sample collection.

Limitations: Bacterial degradation over time.

Types:

1. **Whole saliva:** Salivary Glands Secretions + Gingival Crevicular Fluid+ Microorganisms + Desquamated Epithelial Cells + Leucocytes.
 - a. **Unstimulated saliva:** When resting no exogenous or pharmacological stimulation is present.
 - b. **Stimulated saliva:** When secretion is promoted by mechanical, gustatory, or by pharmacological agents.
2. **Glandular saliva:** Saliva collected from specific site of oral cavity: parotid, submandibular, sublingual.
3. **Minor salivary glands:** Palatine, buccal and labial saliva.

Normal values:

- Daily secretion: 500 - 700 ml

- Submandibular and sublingual glands: 0.25 - 0.35 ml/min.
- Parotid gland: Stimulated secretions only 1 - 1.5 ml/10 - 15 min using citric acid 2 - 4% w/v.
- Unstimulated: 0.25 - 0.35 ml/min.
- Stimulated: 0.2 - 7 ml/min.




Requisites for collecting saliva


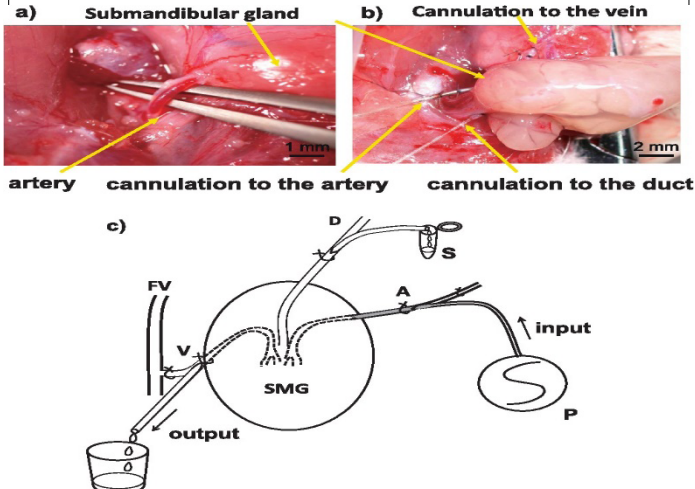

1. Preferably between 8 - 11 AM.
2. Subject should preferably in fasting stage or 2Hrs after breakfast.
3. Subject should not brush their teeth 45min prior to sample collection.
4. Oral examination should not be performed with in 24hrs prior to sample collection
5. Subject should avoid smoking at least 2hrs prior to saliva collection.

Methods of collecting saliva

Cited by: *Ann N Y Acadsci.* 1993 Sep 20; 694: 72-7. Methods of collecting saliva Mahvash Navazesh 1993.

S. no	Methods	Collecting Methods	Procedure
1.	Whole Saliva Draining Method		Unstimulated saliva, most reliable method. Subject is made to sit in head bent down position and allow the saliva to drip passively from lower lip.

2.	Spitting Method		<p>Stimulated saliva, saliva is allowed to accumulate the floor of mouth and subject spits out into graduated test tube.</p>
3.	Suction Method		<p>Procedure is similar to spitting method except the saliva is aspirated continuously using micropipettes, syringes, saliva ejectors or an aspirator.</p>
4.	Swabbing Method		<p>Less reliable method, used in monitoring of drugs, hormones, steroids and level of oral dryness. Saliva soaked synthetic sponge placed at the Orifice of major salivary gland and patient is Made to chew and is placed in sterile test tube.</p>
Glandular Saliva		Collecting Methods	

<p>1.</p>	<p>Parotid Gland</p>		<p>Carlson crittenden cups</p>
<p>2.</p>	<p>Submandibular/ Sublingual Gland</p>		<p>a) Suction method b) Cannulation c) Segregator method</p>
<p>3.</p>	<p>Minor Salivary Glands A) Palatine B) Buccal or Labial</p>		<p>a) Micropipettes b) Filter papers c) High purity chromatography papers a) Sialopaper b) Periopaper</p>