

Poster journal

Lite image analysis module 'A boon in the field of salivary diagnosis'

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Commentary:

Cancer, cardiovascular, metabolic, and neurological diseases disturb the bodily mechanism of an individual, causing a devastating impact on a global scale. Therefore, the diagnosis of such diseases at an early pace is important. An early diagnosis relies on both a thorough clinical evaluation and precise laboratory investigations. Most clinical samples are collected through invasive procedures. The past decade has seen a surge in the development of non-invasive salivary diagnostic¹. In addition to local changes with the oral cavity, the salivary samples have also shown to exhibit alteration in response to several systemic diseases including cancer. They have also been used in forensics to screen for drugs².

Saliva acts as a mirror of an individual's health³ containing various hormones, protein, enzymes that can eventually detect a disease. As mentioned earlier, compared to blood investigations, the medium of collection of saliva is simple, non-invasive, and largely reduces the risk of infection as the individual can collect the saliva without the need for a healthcare provider^{4,5}.

Within the past few decades, the field of salivary diagnostics has reached a stupendous peak. One such example is the Litebox Image Analysis Module (LIAMTM), a portable handheld device holds a promising potential for delivering immediate results from salivary samples collected in the field.

LIAM™ is a portable designed module scan using VerOFy® technology. Following quantification, the files can be transferred to any smartphone or Bluetooth capable device. The device is light, user friendly, and is powered by a battery. Due to its excellent features, it is very easy to operate and is accessible to far and remote locations⁶.

VerOFy®

VerOFy® technology uses immunochromatographic test strips to provide quick results in the field itself or point-of-care locations. It mainly focuses on a combination of a quick and well-standardized collection of saliva along with efficient delivery of results.

USE OF LIAM

- Assessment of salivary biomarker levels in a qualitative or quantitative manner
- Status of the illness/disease
- Saliva tests of cortisol, testosterone, multiple hormone biomarkers

ELEMENTS

- | | |
|----------------------------|--|
| i) The LIAM device | iv) Disposable pipette |
| ii) Cartridge | v) Sample collection tube (Eppendorf tube) |
| iii) Super•SAL | |
| a. Compression tube | |
| b. Sample volume indicator | |
| c. Absorbent pad | |

ADVANTAGES

- Non-invasive
- Rapid
- Easy to use
- Use in remote areas
- Multiple disease detection from a single sample

This technology is mainly designed to formulate a rapid qualitative and quantitative assessment of the salivary biomarker levels indicating the potential disease status. With a very simple hassle-free procedure, LIAM can be considered as a good alternative point of use in far and remote locations where highly equipped laboratories may not be easily accessible.

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Keywords: Point of care diagnostics, Saliva, Oral disease, LIAM, Lateral Flow Test, VerOFy®, Super•SAL

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