Sensors and Materials, Vol. 22, No. 4 (2010) 143–153 MYU Tokyo

S & M 0796

Salivary Sensors in Point-of-Care Testing

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(Received August 26, 2009; accepted March 16, 2010)

Key words: saliva, biosensor, biomarker, point-of-care testing, systemic disease

The key technologies for realizing diagnosis of systemic diseases using saliva samples are biochips, biosensors, and biomarkers. Chemical salivary test (salivary test) has overwhelming advantages over blood test in that it is intrinsically safe and test samples can be self-collected any time. However, a diagnostic methodology for systemic diseases cannot be established on the basis of these advantages alone. It is considered that the practical application of salivary test depends on the successful demonstration that either the diagnostic accuracy of the test is significantly higher than that of conventional techniques, or it can provide additional new information to aid medical treatments. To be specific, this involves the use of new biomarkers. Although rapid, low-cost and highsensitivity analytical techniques using saliva sampling have improved tremendously in recent years, the suggested applications of such techniques are still limited to oral diseases, viral infections and human stress tests. However, in the near future, salivary sensors will be practically applied to various systemic diseases as point-of-care testing (POCT).

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