

Title	Flexible substrate sensors for multiplex biomarker monitoring			
Authors	Brennan, Desmond;Galvin, Paul			
Publication date	2018-07-23			
Original Citation	Brennan, D. and Galvin, P.(2018) 'Flexible substrate sensors for multiplex biomarker monitoring', MRS Communications, pp. 1-15. doi:10.1557/mrc.2018.134			
Type of publication	Article (peer-reviewed)			
Link to publisher's version	10.1557/mrc.2018.134			
Rights	© 2018, Materials Research Society. This article has been published in a revised form in MRS Communications https://doi.org/10.1557/mrc.2018.134. This version is free to view and download for private research and study only. Not for redistribution, re-sale or use in derivative works.			
Download date	2024-04-19 10:14:19			
Item downloaded https://hdl.handle.net/10468/6750 from				



Biomarker	Sample type	Health condition	Range	Ref.
Glucose	Saliva,Sweat	Diabetes	0.5mM - 1.6mM	24
Glucose	Tear	Diabetes	0.025-1.475mmol/l	25
Proteins	Sweat & Saliva	Disease screening	ng/ml - pg/ml	26
Electrolytes	Sweat	Dehydration	0-110mM	27
Interleukin 6	Sweat	Inflammation	0.02pg/ml - 20pg/ml	28
Lactate, salts	Saliva	Dehydration	0 - 110mM	29
Zn,Cd,Pb,Cu,Hg	Sweat	Heavy metal poisoning	100 - 300μg/l	30
Potassium	Sweat & Saliva	Hypo & hyper Kalemia	3.6 -5.2 mmol/l	31
Alcohol/Ethanol	Sweat	Intoxication	0 - 36mM	32
Cortisol	Saliva & sweat	Hypertension	7-28 μg/dl	33
Pathogen cells	Sweat/urine	Infectious disease	10 – 100 cells/ml	52

Table 1: Examples of common target biomolecules, sample fluid and clinical concentration ranges used as applications for wearable health monitoring systems.