



Sweat Band Helps Workers

A SWEAT band designed for use by workers who wear goggles is said to thoroughly absorb forehead perspiration, preventing clouding of the goggles and keeping the workman's eyes clear. The band consists of a cellulose pad covered with high-grade absorbent gauze.



The Smart Sweatband

*Fernando Benito-Lopez,
Shirley Coyle, Robert Byrne,
Dermot Diamond*

**CLARITY Centre for Sensor Web
Technologies, Dublin City University,
Ireland**

pH sensitive dyes

STRIPE	Indicator	Low pH colour	Transition pH range	High pH colour	
1	p-Xylenol blue	yellow	8.0-9.6	Blue-violet	
2	Methyl orange	red	3.1-4.4	orange	
3	Methyl red	red	4.5-5.2	green	*
4	Bromocresol green	yellow	3.8-5.4	blue-green	*
5	Bromocresol purple	yellow	5.2-6.8	purple	*
6	Bromothymol blue	yellow	6.0-7.6	blue	*
7	Neutral red	red	6.8-8.0	yellow	
8	Phenol red	yellow	6.8-8.4	purple	
9	Phenolphthalein	colourless	8.3-10.0	fuchsia	
10	Thymolphthalein	colourless	9.3-10.5	blue	
11	Alizarine Yellow R	yellow	10.2-12.0	red	

pH sensor

CONCEPT:



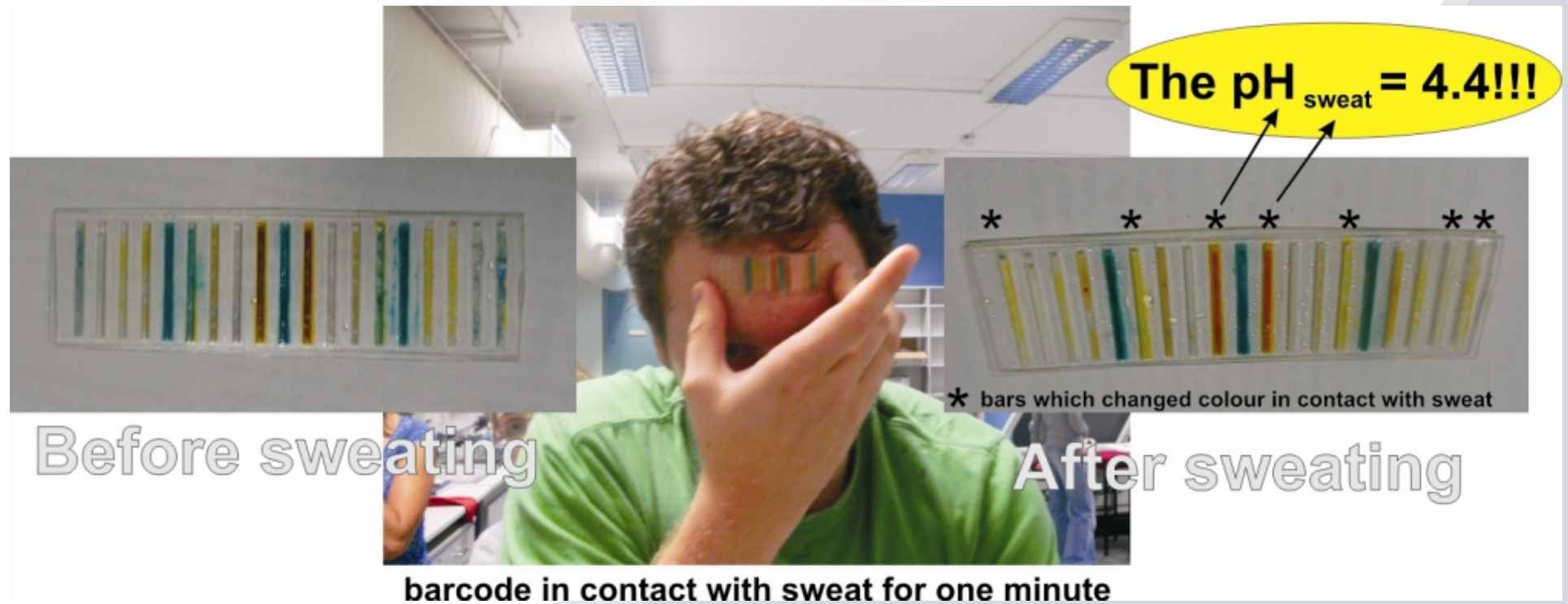
ACIDIC SOLUTION



BASIC SOLUTION

pH wristband

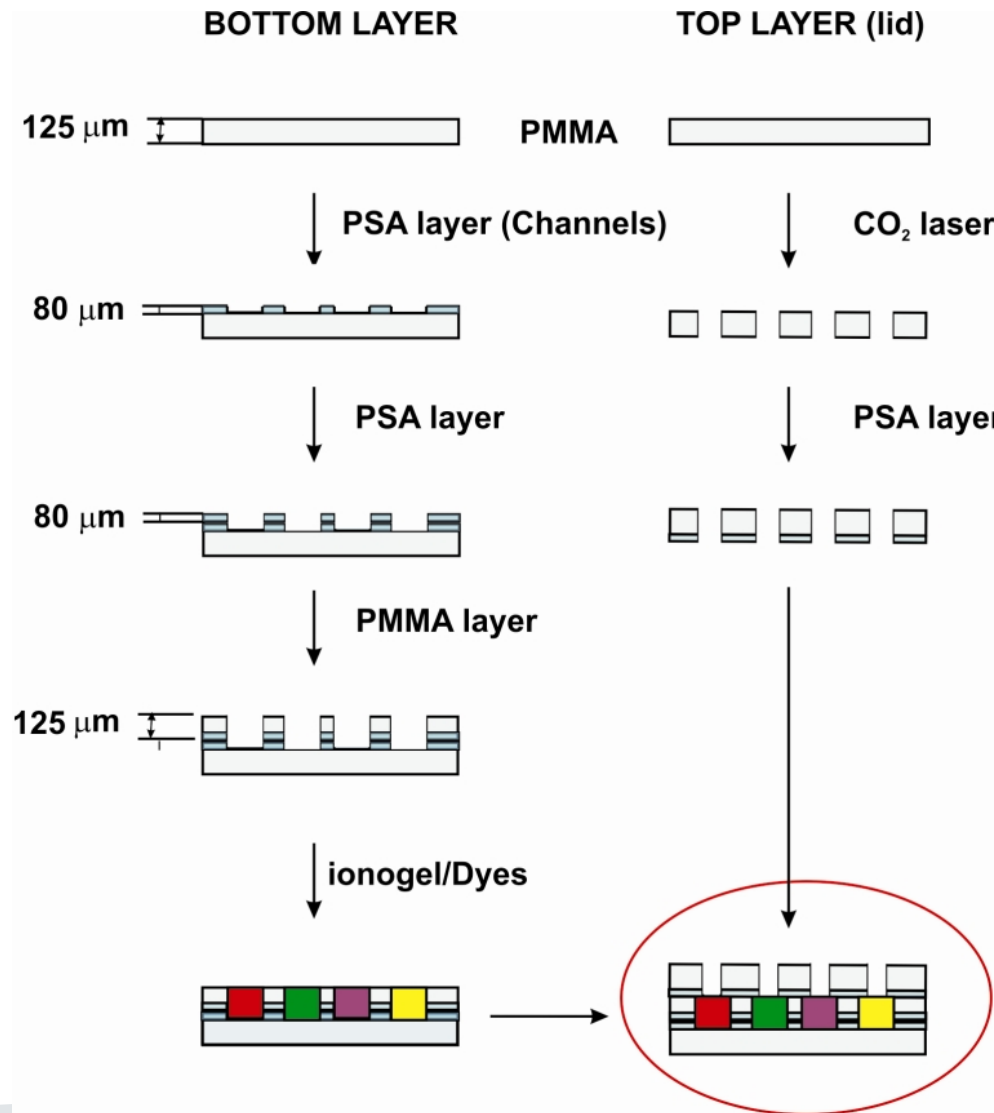
PERFORMANCE:



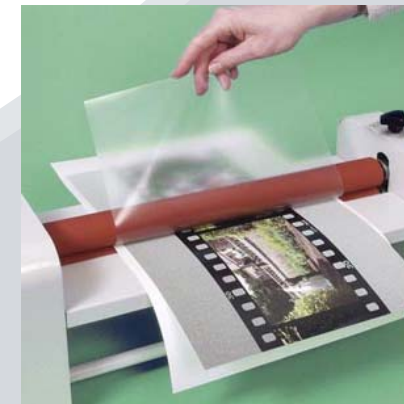
Plaster Sweat Sensor



Fabrication of barcode sensor

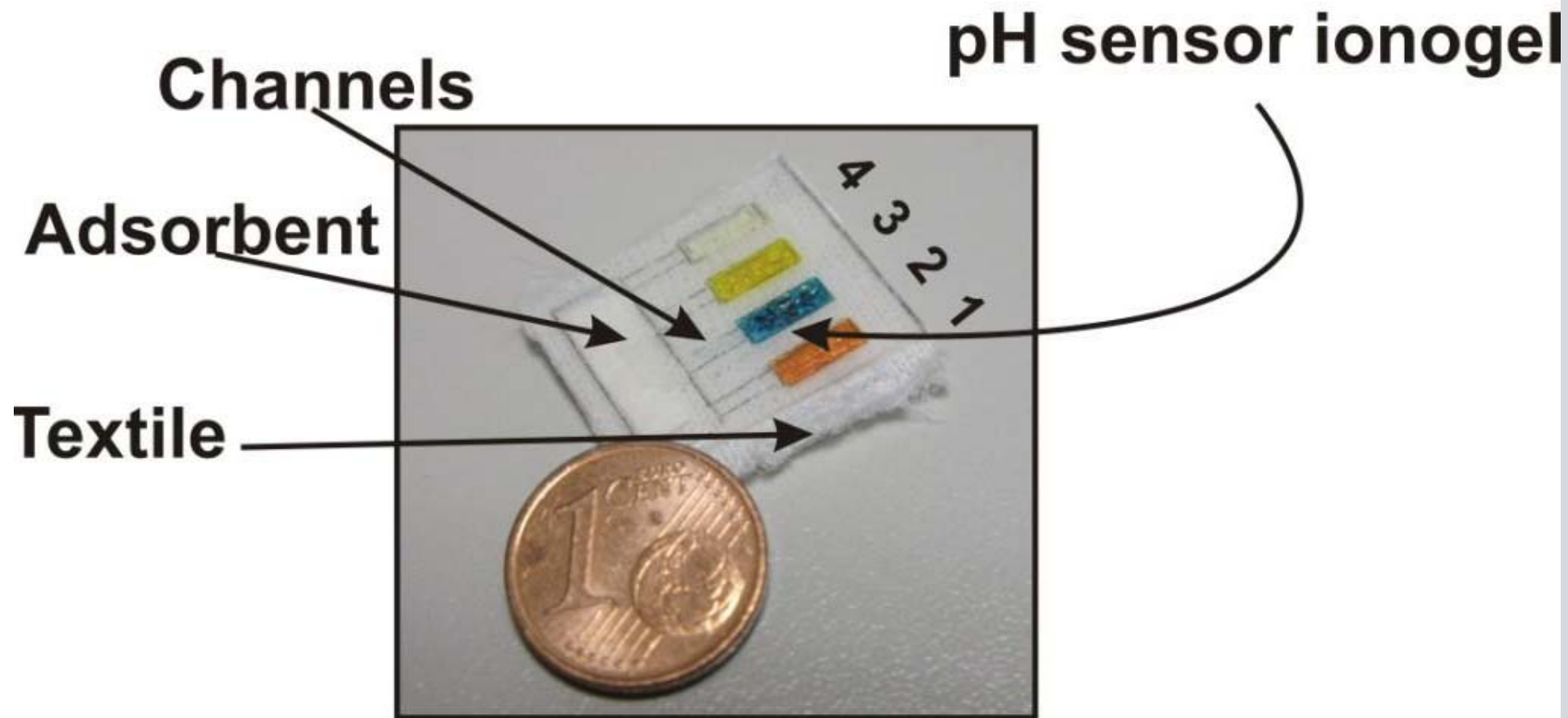


CO₂ laser



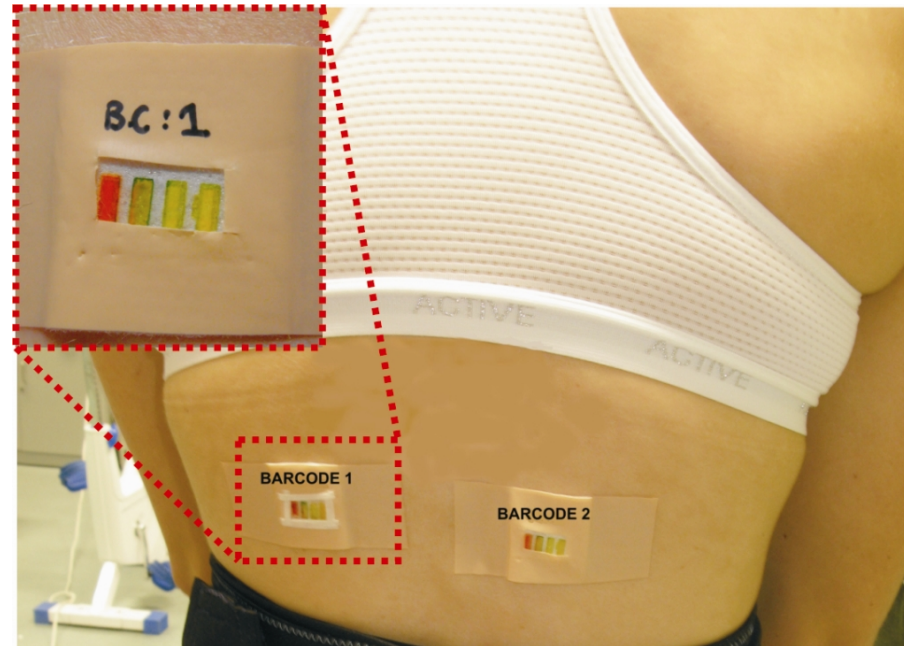
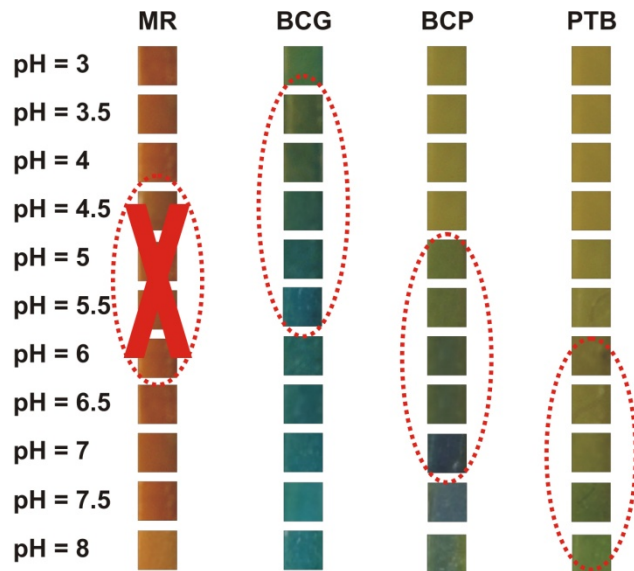
laminator

Microchip Sweat Sensor



Microchip Results

ON-BODY TRIALS

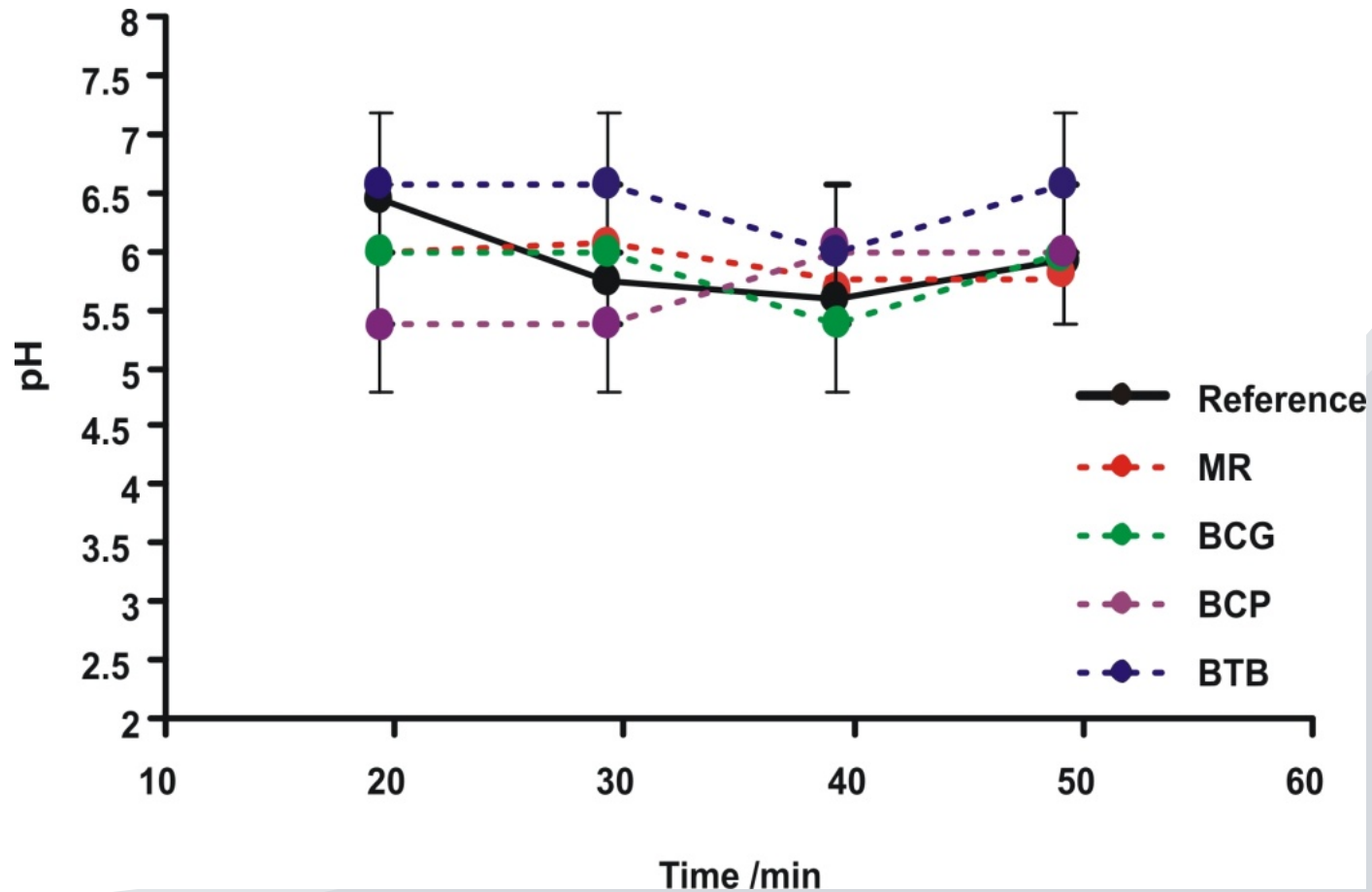


Colour profile of each of the indicators at different pH's (pH range: 3-8)

Picture of the back of a trainer with a micro-device (1) and barcode (2) systems

Microchip Results

RESULTS: camera pictures and RGB colour analysis using a reference.



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