

(54) Title of the invention : WEARABLE PHYSIOLOGICAL BIOMARKER MONITORING DEVICE

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(57) Abstract :

A wearable physiological biomarker monitoring device, a wearable wristband 101 constructed from interconnected plates 102 is designed to be comfortably secured around a user's wrist, an ultrasonic sensor embedded in the wristband 101 continuously monitors wrist circumference, motorized hinges 103 between the plates 102 for smooth expansion or contraction, a sweat sensor 104 to detect sweat presence and enable real-time health marker monitoring from collected samples, a sweat stimulation module 105 with a micro-heating unit 105a and integrated temperature sensor 105b warms the skin to stimulate sweat production when natural perspiration is absent, multiple biosensors analyzes sweat and monitor physiological markers, each plates 102 has an embedded PPG sensor to capture physiological parameters and assess hormonal changes, a waterproof display panel 106 presents real-time readings, multiple LED indicators 107 convey health statuses visually, a timer unit for automatic health checks, and a vibration module 108 for gentle alerts.

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