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(57) Abstract :

The disclosed embodiments illustrate a system (100) and method (300) for detection of possibility of kidney failure at an early stage in a subject by evaluating glomerular filtration rate. The system (100) includes wearable devices (102) adapted to be worn or attached to various parts of body of the subject to identify biomarkers of the kidney in sweat. Thereafter collected biomarkers are analysed to extract concentration of one or more volatile organic compounds (VOC) such as calcium (Ca), magnesium (Mg) and phosphate, and extracted concentration of the VOC is analysed to determine whether the subject is having symptoms of kidney failure. The proposed system enables the subject to get treatment on time and to avoid high risk of kidney disease progression by detection of the disease at early stage.

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