

Illness Diagnosis in Thirty Minutes Using Pocket Analyzer

Development status

Phase 2

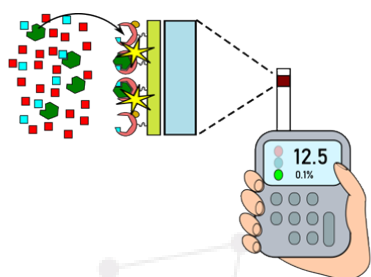
Feasibility study. There is a realistic design of the technology and the initial tests in the laboratory are leading to the specification of the technology requirements and its capabilities.

IP protection status

Know-how, patent- application in preparation

Partnering strategy

Co-development, Collaboration, licensing



Institution

MUNI Technology
TTO Transfer
Office
Masaryk University

Challenge

To provide simple-to-use diagnostic tools for unskilled public, to make accessible diagnostic solutions for nonspecialized environment (doctor's office, home). The pocket analyzer can detect diseases in which the body produces specific antibodies.

Description

Introduced technology is designed as a pocket analyser/biosensor for so called "self-testing" or home-care testing. It is possible to use that out of the specialized laboratory even by unskilled persons. Diagnostic approach consists of the compact analyser of small dimensions which is used for the determination of biomolecules in the liquid sample (e.g. blood, serum, urine). This device includes all important components necessary for autonomous measurement involving a disposable measuring cartridge with the place for sample application and a miniaturized control electronics automatically evaluating measured signal. There is also possibility of power supply using special cheap one-purpose galvanic cells (battery) which are activated by addition of any aqueous liquid (e.g. urine). All operations while using the device were designed to be the simplest, instrument and all its components to be the cheapest as possible and the result to be known up to 30 min from the application of the sample.

Commercial opportunity

Currently, technology belongs to the area of diagnostic/analytic solutions which are among simple ones such as lateral-flow tests (e.g. covid-19 Ag-tests) and highly sophisticated fully automated instruments in clinical laboratories. The main advantage of the technology is the possibility of using clever analytical instruments by unskilled operators, i.e. out of the specialized workplaces. Between other advantages of the technology belongs simplification of the analytical method (lowering the price for one diagnosis), analysis of serum without any purification and possibility to diagnose several different illnesses using one platform (detection of several different analytes using one instrument in combination with different testing

strips).