

CAMPTON Diagnostics

Biochip-Reader A-100

Technical Datasheet



Point of Care Diagnostics made simple

To facilitate the fast and reliable measurement of biomarkers, we intend to introduce the miniaturized automated POC system based on a cartridge with an integrated electrical biochip for ELISA-based decentralized analysis.

This system allows the detection of multiple biomarkers in microliters of serum or whole blood during a few minutes using an ELISA directly on a gold electrode array. The sensitivity of this system is comparable with standard microtiter plate ELISAs.

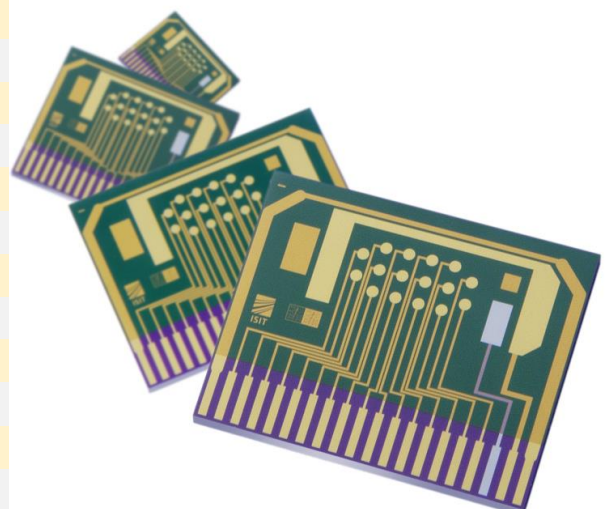
Next to the wide range of possible customized applications, the following established tests are currently available including all required assay reagents in ready-to-use-kits for the biochip system

- Hepatitis C antibodies (HCV)
- C-reactive protein (CRP)
- Prostate specific antigen (PSA)

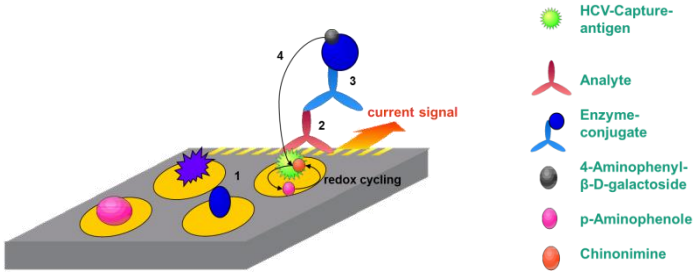
Please take note that the application of the Biochip System is not limited to the diseases mentioned above. We can integrate nearly any ELISA-based assay into the biochip as long as disease-specific proteins can be found in some type of body fluid.

Device specification

Sample type	Whole blood or serum sample
Sample volume	2 μ l – 20 μ l
Assay dependent test time	7 min. - 17 min.
Positions per chip	16 (more positions on request)
Operating temperature	4 °C – 30 °C
Storage temperature (Cartridge)	Room temperature
Storage temperature (Reagents)	Room temperature
Operating humidity	< 85 %
Power source	120 V - 230 V AC
Dimensions	250 mm x 140 mm x 250 mm
Weight	5,2 kg
Interfaces	Bluetooth / RS232



CAMPTON Biochip-Reader Technology: Immunoassay on an electrical biochip



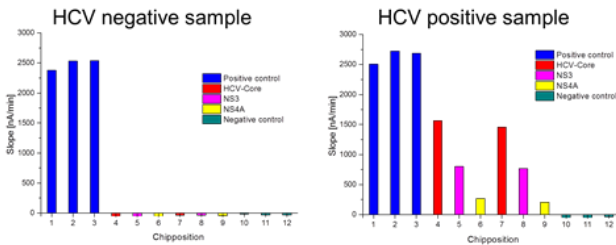
1. Biochip with different capture molecules
2. Adding a serum or whole blood sample
3. Adding the enzyme conjugate
4. Adding the substrate and electrical read out

CAMPTON Biochip-Reader Applications

Sample application 1:

Detection of Hepatitis C Virus Infections

Sample measurements performed by the mobile biochip reader:

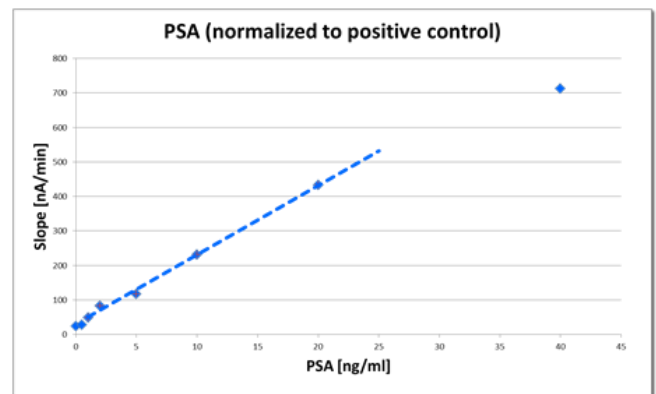


Sample application 2:

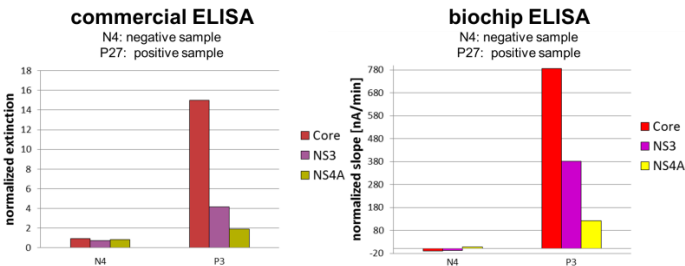
Detection of prostate-specific antigen (PSA)

Linear range of the concentration curve: 1ng/ml – 20ng/ml

Test duration for PSA biochip ELISA: 17 minutes



Test mit 71 Serumproben zum Vergleich von Biochip-ELISA versus kommerziellem ELISA:



32 positive HCV samples 39 negative HCV samples *	commercial ELISA	biochip ELISA
Test correctness	88.7%	94.4%
Test duration	4 h	15 min.

* L.Blohm *et al.*, "Rapid detection of different human anti-HCV immunoglobulins on electrical biochips", *Antibody Technology Journal* 2014:4 23–32



Are you interested in more information?

Our Experts will gladly assist you with any queries.
We look forward to hearing from you!

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