



pTD

- Portable Toxin Detector

Portable Toxin Detector (pTD)

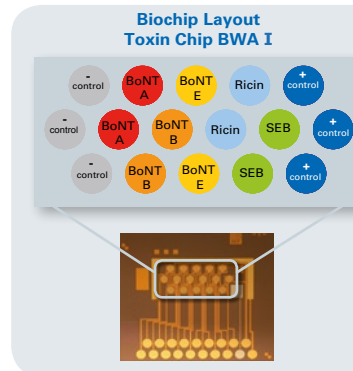
The pTD is a self-contained identification platform for automated and specific detection of biological toxins associated with biological warfare agents (BWA). The detection principle is based on an enzyme-linked immunosorbent assay (ELISA) procedure. Antibodies immobilized on gold electrodes attached to a toxin chipstick facilitate the specific

capture of corresponding toxins from an applied liquid sample. Detection of captured toxins is realized by measuring the electrical current of an enzymatic redox reaction. The current correlates to the amount of target molecules bound to the specific antibodies. The whole identification procedure is realized in less than 25 minutes.

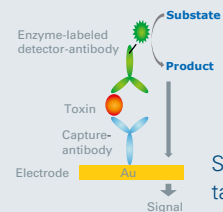


Closable sample and reagent holder for safe handling

- Parallel detection of five toxins, which are relevant as BWA
- Ready-to-use kits for assay performance
- Plug and play operation using disposable chipsticks
- Ready for integration into sensor networks
- Extendable system to address new biological threat agent



Detection Principle



Schematic representation of the protein array and the detection principle.

Technical Specifications

Length x Width x Height

350 x 305 x 352 mm

Weight

14.2 kg (including reagent and sample holder)

Operating range

- Operating temperature ranges from 10 to 35°C
- Humidity ranges up to 80% (relative humidity)

Power requirement

- 24 V DC (+/- 15%)
- 110 to 240 V AC (external power supply)

Power consumption

30 W

Detectable agents

- Botulinum neurotoxin A
- Botulinum neurotoxin B
- Botulinum neurotoxin E

- Ricin
- Staphylococcal enterotoxin B

Limit of detection

Low ng/mL-range

Data handling Separate PC (Notebook), Windows XP based operating system

Data interface RS 232

Certifications

- CE
- EN 55011 Class B (electromagnetic disturbance)
- EN 61326-1 (noise immunity)
- EN 61010-1-2 (harmonic current emission)

Fields of application

- Mobile CBRN field laboratory
- CBRN incident response vehicles
- Emergency responder (on-site analysis)

For research use only. Not for use in diagnostic procedures.

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