

DEPSOR-M

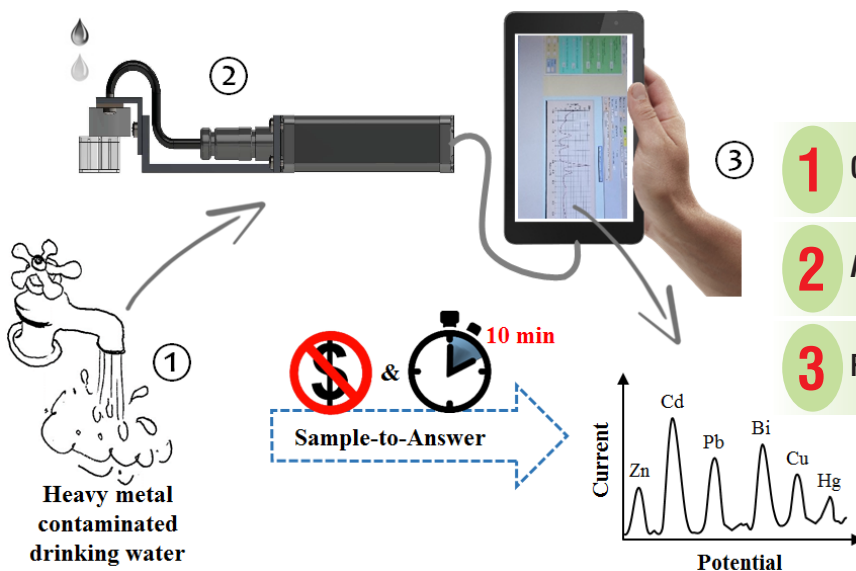
for rapid and simultaneous testing of multiple heavy metals



- Rapid electrochemical detection of heavy metals (5-10 min)
- Reliable detection limit (sub-ppb or $\mu\text{g/L}$ levels)
- Affordable (running cost <1 USD per sample)
- Easy-to-detect with user-friendly PC-software
- Portable & on-site analysis

The DEPSOR provide a portable, rapid, and cost-effective way of electrochemical detection of multiple heavy metals in environmental samples. The DEPSOR is powered by disposable screen-printed electrode chips (DEP chips) and compact PC software-controlled potentiostat which is originally designed and fabricated by our collaborator, BioDevice Tech., in Japan. The supplied software is user-friendly and offers the major electrochemical measuring techniques. These key features allows DEPSOR-M as the ideal tool for regular and in-house electrochemical monitoring of traces of heavy metal pollutants in drinking and food samples with easy.

Three Simple Operating Steps
to Test heavy metal level
in liquid samples



- 1 Collect** : Mix sample with electrolyte buffer solution
- 2 Apply** : Drop sample onto DEP chip
- 3 Result** : Run software for electrochemical analysis

Limit of Detection ($\mu\text{g/L}$)

Cd	Pb	As	Hg	Cu	Zn	Au	Ag	Se
2.6	2.2	5.0	1.5	15.5	14.4	15	24	10

Validation performance evaluation
in comparison with ICPMS
(Inductively Coupled Plasma Mass
Spectrometry)

Cd*	Pb*	Hg*	Zn*	Cu*
0.9921	0.9992	0.9992	0.9961	0.9824

* correlation coefficient

DEPSOR-M Components & Specifications

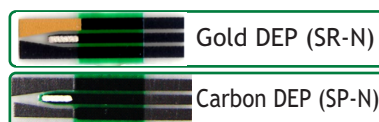
1. MiniSTAT100 Potentiostat

- Potential range -2.000 ~ +2.000 V with a resolution of 2 mV
- Support 5 voltammetric techniques: CV, LSV, CA, DPV, SWV
- Ultra-light weight (65 g)
- Palm-sized (75×50×20 mm)
- USB powered (wireless/via Bluetooth, optional)



2. DEP chips envelop (60 DEP-chips SP-N type)

- Screen-printed disposable electrode
- Size 12.5 mm × 4 mm × t 0.3 (2.64 mm² area of working electrode)
- Mass productivity (60/sheet) and low-cost (<1 US\$)
- High quality (CV <5%)
- Easy-to-handle with long shelf-life



3. DEP chip holder

- 2-in-1 type (Dip-mode & Drop-mode)
- Low-volume sample (1 drop in Drop-mode, 500 μL in Dip-mode)
- Simple & easy measurement • Stable measurement



- 4. **Tablet with KME software** for one-click electrochemical measurements (data acquisition to processing to analysis and export)

- 5. **Electrolyte buffer-coated vials** for easy-to-use and rapid on-site testing using originally designed protocol

ORDERING INFORMATION:

- DS-B: DEPSOR instrument • DS-S: DEPSOR instrument with tablet
- DS-B-M-St: DEPSOR instrument with Carbon Kit and Gold Kit for 100 tests • DS-M-Std: Standard buffer solutions
- DS-M-Au50: Gold Kit for 50 tests of heavy metals • DS-M-C50: Carbon Kit for 50 tests of heavy metals

For Technical Information:

BioSeeds Corporation | バイオシード株式会社

Ho-70-6 Hyuga, Hakusan, Ishikawa 920-2146, Japan

920-2146 石川県白山市日向町ホ70-6

Tel/Fax : +81-76-295-9065 • E-mail : info@bioseeds.jp • http://bioseeds.jp

In collaboration with:

Biyani BioSolutions Pvt. Ltd.

3rd Floor, R-4, Sector-3, Vidhyadhar Nagar, Japur-302039, Rajasthan, India

Tel : +91-141-2338591-95 • Fax : +91-141-2338007

E-mail : biyanibiosolutions@gmail.com • http://biyanibiosolutions.com

