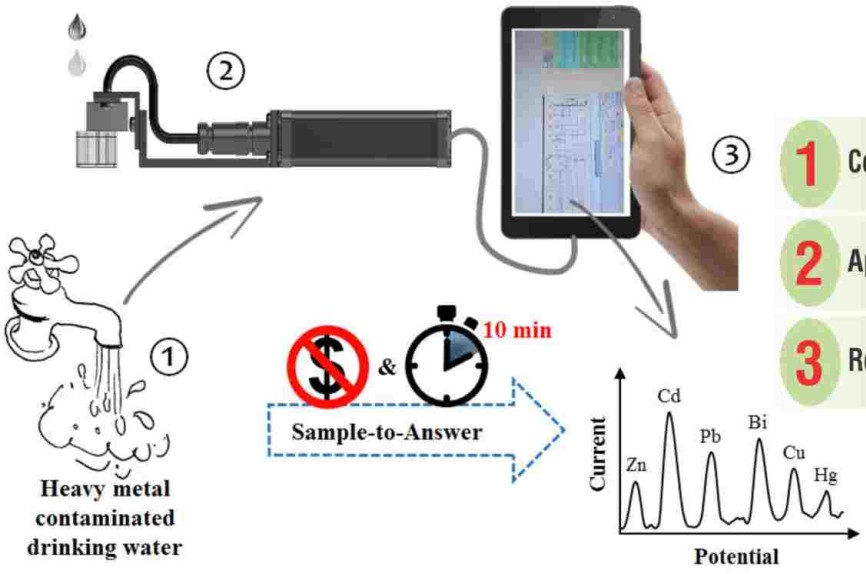
DEPSOR-M

for rapid and simultaneous testing of multiple **heavy metals**

- **Rapid** electrochemical detection of heavy metals (5-10 min)
- **Reliable** detection limit (sub-ppb or µg/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

SENSITIVITY

Limit of Detection (μg/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

VALIDITY

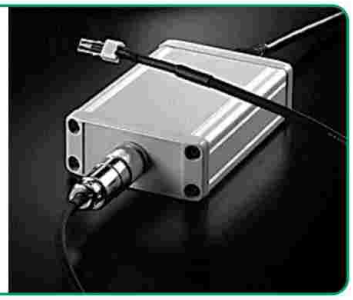
Validation performance evaluation in comparison with ICPMS (Inductively Coupled Plasma Mass Spectrometry)

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

* correlation coefficient

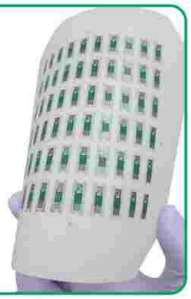
DEPSOR-M Components & Specifications

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)

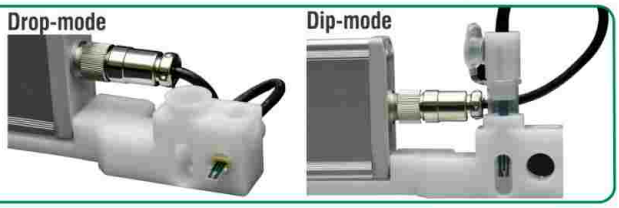
2. DEP chips envelop (60 DEP-chips SP-N type)



- Screen-printed disposable electrode
- Size 12.5 mm × 4 mm × t 0.3 (2.64 mm^2 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

BioSeeds
Chaos to Order, Random to Functional

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