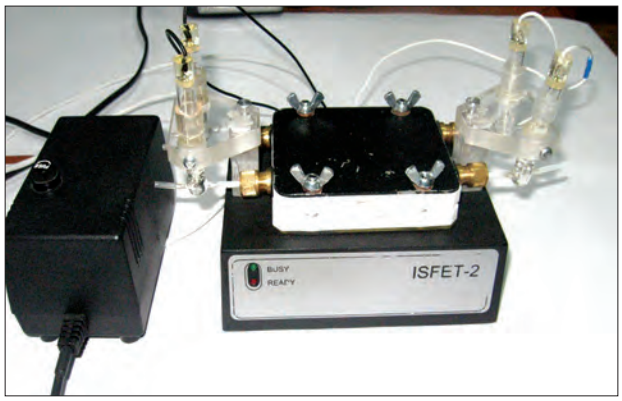
MULTIBIOSENSOR FOR DETECTING TOXIC SUBSTANCES IN WATER SAMPLES



Measuring device with multibiosensor and flow-through system

Areas of Application

The device is to be used for measuring concentrations of toxic compounds as part of ecological monitoring of water reservoirs and soil

Advantages

No commercial analogues are known. In comparison with the similar laboratory prototypes the proposed multibiosensor is portable and suitable for measurements in field conditions with the possibility of distinguishing between different classes of toxins, has a low price, and does not require any sample pretreatment

Specification

Analyte	Heavy metal ions	Pesticides
Bio-selective elements based on:	Urease, glucose oxidase, acetylcholinesterase, butyrylcholinesterase	Acetylcholinesterase, butyrylcholinesterase
Butyrylcholinesterase	$10^{-6}-5\times10^{-3}$	$3\times10^{-11}-5\times10^{-4}$
Storage stability, months	4	4
Duration of analysis, min	20	20
Measurement error,%	≤15	≤15

Stage of Development. Suggestions for Commercialization

IRL5, TRL4
The device is manufactured upon request; seeking partners for the mass production

IPR Protection

IPR3

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