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DEVICE FOR RAPID PREPARATION OF SAMPLES FOR DETECTION AND IDENTIFICATION OF THE TOXIC COMPOUNDS

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Abstract

This paper presents a portable device for rapid preparation of samples, in situ, in order to facilitate the detection and identification of toxic substances. This product is for research and provides increased sensitivity NBC detection equipment (ion mobility spectrometers, indicated tubes), and decreasing the time needed for preparation solid and liquid samples to identify toxic substances by spectrometric techniques (gas chromatography with mass spectrometry). It is used especially for preparing various types of samples (soil, water, organic solvents), in situ, in diverse climate conditions. This device permits the decreasing of the detection and identification time of the toxic substances in chemical incidents, influencing in a positive way the period of the specific laboratory operations by performing them on site. It can be used for military and civil institutions that hold equipment for detection and identification or by policy makers who must intervene in chemical incidents (military conflicts, accidents or terrorist actions).

Key words: cartridge extraction, chemical warfare agents, dangerous toxic substances, detection, environmental, identification, in situ, low volatility, rapid preparation

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