

Ion Mobility Spectrometer



Non-radioactive ionization source

Doesn't require high-priced expandable materials

Wide range of detected chemical agents including home-made peroxide explosives

Open database of substances with possibility of alter extension

KERBER-T

IMS KERBER is designed to detect trace quantities of low-volatile organic substances, among them are explosives, drugs and toxic substances in the air around controlled objects, on the surface of different objects, on fingers and clothes.

The scope of application for the detector :

- vehicle, cargo and people inspection at customs control;
- territories and objects inspection by environmental control services;
- suspects inspection by law-enforcement officials etc.

The detector can be used when inspecting territories, premises, mobile objects and cargo during customs and border control, in expert-criminology laboratories of different departments, analytical laboratories of industrial enterprises and scientific-research organizations.

The detector is serviced by one person and designed for work both in field environment (directly at the place of control) and under conditions of stationary and mobile specialised laboratories.

Basic features

Feature	Value
Overall dimensions of the detector, mm	110*162*400
Weight, kg	3.5
Measurement range of normalised (reduced) mobility of analyzed ions, $\text{cm}^2/\text{V}\cdot\text{s}$	0.5 – 3.0
Detection range of low-volatile organic substances based on 2,4,6-trinitrotoluene (TNT), g,	$0.1 \cdot 10^{-9}$ – $200 \cdot 10^{-9}$
Threshold for detecting low-volatile organic substances based on 2,4,6-trinitrotoluene (TNT),	
- particulate matter, g, not less	$1.0 \cdot 10^{-11}$
- based on vapours, g/cm^3 , not less	$0.1 \cdot 10^{-9}$
Time for operating mode start-up, min, not more	20
Measurement time, s, not more	10
Time of changing the type of analyzed ions (negative or positive), min	1 - 2
Possibility of false response, %, not more	1
Time of continuous autonomy work with regular block of accumulation batteries, hour, not less	5
Time of detector cleaning under regular operating conditions, min, not more	3
Mean Time Between Failures (MTBF), hour, not less	2000
Service life Time, years, not less	5

Principles of operation IMS (Ion Mobility Spectrometry)

ionization source - impulse corona discharge

