

Complex For Detection and Identification of Explosives, Hazardous Chemical and Biological Agents Segment Gamma



Continuous air monitoring in any premises
for identification (detection) of explosives, chemical
and biological threat agents



SEGMENT-BIO



Identification
of biological threat agents



SEGMENT



Identification and recognition
of hazardous chemical agents



Identification and recognition
of explosives



Complex For Detection and Identification of Explosives, Hazardous Chemical and Biological Agents

Segment Gamma



SEGMENT explosives and hazardous chemical agents detection unit

SEGMENT



Detection principle	bipolar ion mobility spectrometry
Identified explosives	blasting and initiating, industrial and home-made, including: TNT, RDX, PETN, DNT, nitroglycerin, EGDN, HMX, tetryl, trinitrophenol, ammonium nitrate/ANFO, dinitronaphthalene, acetone triperoxide, HMTD, as well as mixed explosives based on them (plastic explosives, dynamites, gunpowder, etc.)

Detectable hazardous chemical agents	<ul style="list-style-type: none"> - hazardous chemicals: hydrogen sulfide, hydrogen chloride (hydrochloric acid), hydrogen fluoride (hydrofluoric acid), sulfur dioxide (sulfur dioxide), chlorine, ammonia, nitric acid. - CWAs: sarin (GB), soman (GD), VX, mustard gases (HD, HN_x), lewisite, phosgene, diphosgene, hydrocyanic acid/cyanides.
--------------------------------------	---

Detection limits:	
- for traces of explosives (in terms of TNT)	< 1 ng
- for CWAs	$1.0 \cdot 10^{-3} - 1.0 \cdot 10^{-2} \text{ mg/m}^3$
- for TICs	ABOUT 1×PEL (PERMISSIBLE EXPOSURE LIMIT)
Response time	max 5 sec
Dimensions (L×D×H)	180x110x225 mm
Weight	3.5 kg
Consumed power	up to 65 W

SEGMENT BIO hazardous biological agent detection unit

SEGMENT-BIO



Detection principle	flow cytofluorimetry
Detectable hazardous biological agents	any bioaerosols (airborne particles of toxins, bacteria and viruses) with a characteristic particle size

Detection limit for biological aerosols	$5 - 10^{-5} \text{ mg/l}$
Response time	max 15 sec.
Dimensions (L×D×H)	180x380x225 mm
Weight	7,3 kg
Consumed power	up to 80 W

General characteristics of the complex	
Probability of detection of biological aerosols at concentrations corresponding to the specified detection limits	min 98 %

Probability of false detections of biological aerosols	max 0.05 %
--	------------

Operation conditions:	
- temperature	from -20 to +30°C
- relative humidity	from 30 to 98% (at +25°C)
Power supply	220 V, 50 Hz or from storage batteries

Start-up time at temperature from 0 to +30°C	max 3 min
--	-----------

Communication interfaces	USB, Ethernet, Wi-Fi, dry contact
--------------------------	-----------------------------------

Data format for logging and transmission	XML
--	-----

Mass and dimensional characteristics of the integrated complex

Overall dimensions (DxWxH)	700x600x1800 mm
Weight	100 kg

Possibility to integrate equipment for air sampling and further analysis

