vitaldrive

ALL TOGETHER

Laboratory Of Environmental Analysis (ECOLAB)

The laboratory is intended for a fast estimation of quality of an environment by measuring of its parameters by express- methods and their comparison with maximum-permissible concentration. The express estimation allows to make the decision on a complex of urgent actions and to determine a direction of the profound research of a situation.

The equipment of laboratory allows executing quickly analyses of atmospheric air, drinking, natural, sewage waters, ground directly on object, at use of portable devices, complete sets - laboratories without application of a water supply, a consuming electricity equipment.

Depending on an ecological situation of the certain region where the level of pollution of the surrounding natural environment is determined in view of number and the area of settlement, a lay of land, development of the industry, a network of highways with intensive movement of transport and their arrangement in territory of city, dispersion places of rest and resort zones, for measurement of specific pollution at the request of the customer, the laboratory of the ecological control can be completed with additional devices, complete sets - laboratories, tests - complete sets, indicated tubes.

The list of the equipment and complete set of laboratory

All-metal van, divided on 2 compartments:

Cargo compartment.

It is intended for transportation of auxiliaries.
Opening doors with blind windows;
Cable conclusions on the back wall of a compartment;
A drum with cables of a power supply 220 W and a cable of grounding;
A tuba for tools storage .

Working compartment.

It is intended for work of a brigade from two people.
Finishing of walls by plastic panels. Cont.
The side door with a blind window.
The working table. The curbstones equipped with sliding drawers.
Exhaust ventilation.
A rotary chair of the operator.
A double seat.
A lining of cable channels of an electric equipment and measuring devices;
Special control panel and the signal system.
Management of illumination.
Management of heating.
System of air conditioning.

3. The equipment of laboratory

3.1. Portable laboratory for the analysis of water and ground CEL-890 -1 piece

The given portable laboratory distinguishes modern technologies and practical design. In a basis of laboratory is all-purpose colorimeter DR/800. In a strong case necessary reagents and accessories are placed. The exact structure of reagents is selected individually as much as possible to correspond to requirements of the customer.

The basic features:

- Opportunity to carry out research anywhere: in field conditions or within the precincts of laboratory.
-Contains all reagents and accessories for necessary measurements
-The strong case protects devices and reagents from influence of an environment
- An opportunity to carry out more than 80 various analyses

The complete set contents:

1.1. Colorimeter DR/800 -1 piece;
1.2. Portable turbidimrter-1 piece;
1.3. Portable pH-meter-1 piece;
1.4. Conductivity apparatus-1 piece;
1.5. Digital titrator-1 piece;
1.6. Set of reactants and utensils-1 set.

3.2. The analyzer of oil products in water the "OSMA-310" -1 piece

It is intended for measurement of mass concentration of oil products in waste and natural waters by a method infra-red photometry.

The analyzer of oil products can be completed with extractors of different types, auxiliaries and standard solutions of mineral oil.

The basic features:

- Small dimensions and the weight, allowing at presence of the autonomous power supply to make measurements in field conditions.

-Opportunity of operative introduction in memory of the built - in processor of calibration on standard solution of oil products of any structure.

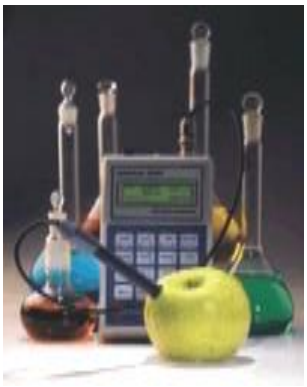
-Opportunity of carrying out of the analysis at use of various ways of extracting and test preparing.

-Working range from 0 until 200 mg/l
-Minimal time of warming up
-Absence of necessity of optical adjustment
-Fixation of reading after their stabilization
-Function of self-diagnostics
-Storage in memory of the given 50 measurements
-The filter for separation of water from oil products
-Extractive S-316 for all types of oil products
-RS-232C and port for the printer and the personal computer
-The built - in extractor for polluted oil samples
Range of mineral oil measured to concentration in water
from 0, 04 until 1000mg/l.

3.3 The micro process analyzer EKOTEST-2000 -1 piece

It is used for potential meters measurements at the analysis of drinking, natural, waste water, ground, forages, food raw material, foodstuffs and drinks.

The basic features:



-It combines pH-meter, ionometer, termooximeter, BPK-tester
-Measures up to 28 various anions and cations [H, K, Ba, Mg, F, CN, NO3, CO3 and other]

-Granting of results in moles/l, mg/l, mV, pX

Ranges of measurements:

EMF, mV -3200 until +3200
Oxygen, mg/l 0-20
Temperature, C from -5 until 150
Activity of ions, unit pX [pH]-20 until +20

3.4 Photoionization portable gas analyzer Kolion -1B -1 piece

It is intended for measurement of the total contents of harmful substances in air. Determinated compounds – vapors of hydrocarbons of oil, gasoline, kerosene, diesel fuel, mineral oil, organic solvents, aliphatic[except for methane and ethane], aromatic and nonlimiting hydrocarbons, chloralcens[vinyl chloride, three - and perchloroethylene], ethanol and other spirits, aldehydes and ketons, complex ethers, ethylene oxides, amines, mercaptans, ammonia, hydrogen sulphide.

The basic features:

-High sensitivity
-Wide range of measured concentration [0-2000mg/m]

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Absence of necessity of spent materials, additional gases and graduation in the time between checkups.

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Explosion-proof performance -The automatic control of the discharge of the block of accumulators -
Presence of the signal system about excess of the set level of concentration
-Measured concentration is registered in a digital kind on the liquid crystal indicator
-The small sizes and weight.

Composition of the complete set:

1.1. The measuring block- 1 piece;
1.2. Sampler-1 piece;
1.3. Filter-1 piece;
1.4. Charging device-1 piece;
1.5. Stacking bag- 1piece;
1.6. Passport-1 piece;
1.7. The operation manual;
1.8. Method of checking.

3.5.Portable Gas analyzer “Kometa -4” -1 piece

It is intended for the simultaneous selective control of oxygen, of carbon monoxide, of sulphur dioxide, of nitrogen dioxide.

The basic features:

Газоанализатор "Комета-4Г" без чехла.

-The liquid crystal display, digital values on each channel
-Optical and acoustic signal system
-A feed from the Li-on accumulator
-Time of continuous work -30 hours
-Working range of temperatures -30 until +50 C
-Weight no more than 0,800 kg

Range of measurements:
O2 – 0-30%
CO – 0-200mg/m³
SO2-0-500mg/m³
NO2-0-10mg/m³

3.6 The meteorological meter MES -200 -1 piece

It is intended for measurement of:

- Atmospheric pressure.
- Relative humidity of air.
- Temperatures of air.
- Speeds of air flows.
- Integrated parameter of thermal loading of environment [TNS-index]
- Temperature of the damp thermometer.
- Concentration of toxic gases CO, H2S, SO2 in an atmosphere

and inside premises.

The basic features:

-Illumination of the indicator.
-A standard connection channel RS 232, RS 485

Composition of the complete set:

1. The universal measuring block of electronics;
2. Basic measuring plate;
3. A set of replaceable plates, being the finished modules;
4. The charging device.

3.7 Dosimeter – Meter of radioactivity “EKO-1” -1 piece

It is intended for measurement of capacity of an equivalent doze of photon radiation, specific activity and a stream of beta particles, it is applied to an estimation of radiating conditions.

Technical parameters:

-Kind of ion radiation – γ and β radiations
-Range of measurement of - β radiation, Mev-0,06-1,25
-Energy of registered β -radiation, Mev not less than 0,15
-Range of measurement of activity, kBk/kg-0,5-10,0
-Ranges of measurement of density of a stream of β -particles from polluted surfaces at confidential probability 0,95-<20
-Operation time without recharging the accumulator - not less than 30 hours
-Weight - no more than 0, 36 kg.

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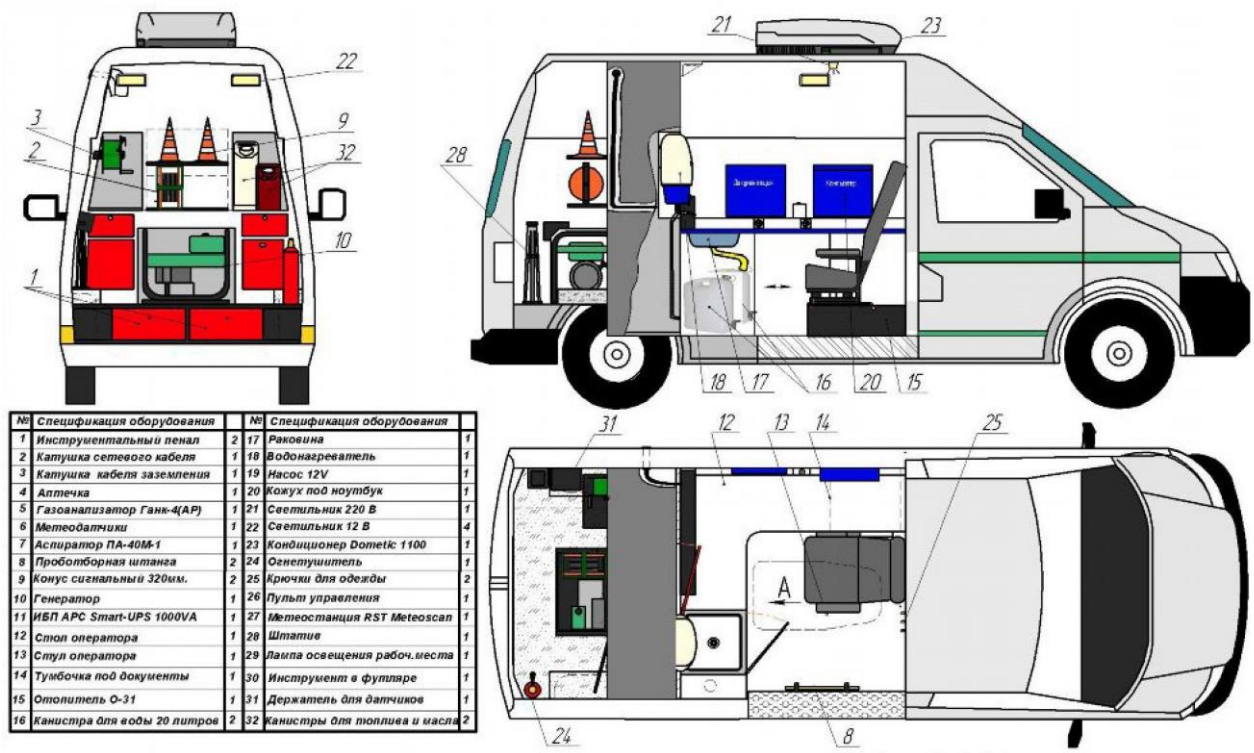

№	Спецификация оборудования		№	Спецификация оборудования	
1	Инструментальный пенал	2	17	Раковина	1
2	Катушка сетевого кабеля	1	18	Водонагреватель	1
3	Катушка кабеля заземления	1	19	Насос 12V	1
4	Аптечка	1	20	Кожух под ноутбук	1
5	Газоанализатор Ганк-4(АР)	1	21	Светильник 220 В	1
6	Метеодатчики	1	22	Светильник 12 В	4
7	Аспиратор ПА-40М-1	1	23	Кондиционер Dometic 1100	1
8	Пробоотборная штанга	2	24	Огнетушитель	1
9	Конус сигнальный 320мм.	2	25	Крючки для одежды	2
10	Генератор	1	26	Пульт управления	1
11	ИБП APC Smart-UPS 1000VA	1	27	Метеостанция RST Meteoscan	1
12	Стол оператора	1	28	Штатив	1
13	Стул оператора	1	29	Лампа освещения рабоч.места	1
14	Тумбочка под документы	1	30	Инструмент в футляре	1
15	Отопитель О-31	1	31	Держатель для датчиков	1
16	Канистра для воды 20 литров	2	32	Канистры для топлива и масла	2

3.8 System for testing water samples PE-1420 -1 piece

It is intended for sampling on the set depth. The system works from the messenger of weight. Test is guaranteed protected from getting inside surface layers and a microlayer.

Technical parameters:

-Amount of taking samle-2, 0 l
-The maximal depth of sampling - without restrictions.
-The minimal depth of a reservoir-50 sm
-The minimal diameter of hole in ice or chank-160 mm

-Material of system – polytetrafluorethylene [PTFE]-4
-A way of system suspension – Capron cable in diameter 6mm
-Diameter of system -100 mm
-Height in an initial condition-350 mm
-Height with sample-720mm
-Weight of system in a dry condition-5,0kg.

Structure of the complete set:

1. Sending weight.
2. A kapron cable in diameter 6mm-5m;
3. Polypropylene Funnel 250mm.

3.10 Set of tools in case -1 set

The complete set includes:

1. An electro drill with the puncher 500 W.
2. A hammer 0, 5 kg.
3. A set of butts [5, 6, 7, 8, 9, 10, 11, 12, 13 mm]
4. Wire cutters
5. Flat-nose pliers
6. A screw-driver with a set of bats.
7. A roulette of 5м.
8. Adjustable spanner
9. A knife.
10. Drills Ø 4,5,6,8,10 mm
11. Hard alloy drills
12. Hack-saw for metal

3.11 Notebook Toshiba Satellite M40X-105 -1 piece

Allows storing and using the data on the carried out measurements. Works with software of the equipment which is included in the complete set of delivery of laboratory.
Display 15.4”WXGA [1200x 800]
Processor: Intel Celeron M 1.5 GHz
Cache , Kb 1024

Continued on next page…
Operative memory, Mb:256
Hard disk , Gb : 40
The video adapter: Intel 915GM 16-128MB[UMA]
Optical drive : DVD-CD
Sockets/Slots : RGB[monitor] port 2 x USB 2.0
PS/2 port [keyboard, mouse]
1 x IEEE 1394
Microphone jack
Headphone jack
RJ-45 LAN port
RJ-11 modem port
Operating time on the battery 3 hours25 minutes

3.12 Petrol power station SDMO –HX 2500 1 piece

Capacity 2, 2 kWt
Mark of the engine/type of cooling Honda/OHV/by air
Fuel: Petrol
Overall dimensions, mm 590x460x480
Weight: 33kg

4. The complete set of operating documentation

4.1 . The operation manual of laboratory

4.2 . The certificate of an origin

4.3 . The operation manual on devices and the equipment

4.4 . The service book on the vehicle

5. Training of experts of the customer

Training of experts of the customer to rules of work with laboratory is carried out on territory of the customer. Trainees have an opportunity in practice to familiarize with work of the equipment of laboratory.
Training is carried out during 1 week.