Lumex Instruments

Insight into mysteries of nature

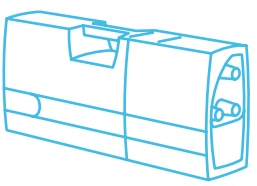
Product catalog

Lumex Instruments develops, manufactures, and supplies a wide range of laboratory and industrial analytical instruments and measurement techniques.

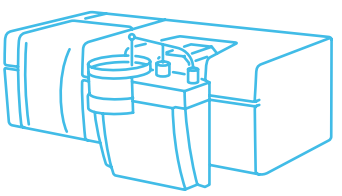
Our products are used in:

- ENVIRONMENTAL CONTROL
- FOOD AND BEVERAGE QUALITY CONTROL
- OIL AND GAS INDUSTRY
- GEOCHEMISTRY AND MINING
- ACADEMIC RESEARCH
- ENERGY INDUSTRY
- AGRICULTURE
- LIFE SCIENCES
- SAFETY CONTROL
- PHARMACEUTICALS

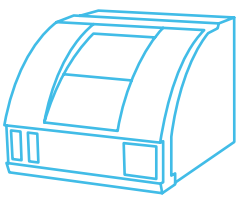
We offer ingenious solutions both traditional and new, unique technologies and conventional instruments. In addition, we provide well-established reliable applications and innovative methods. Our company has developed, manufactured, and sold more than 20 000 instruments globally since the company found. Lumex Instruments representative offices and authorized local distributors provide services and training worldwide.



Mercury analyzers and monitors

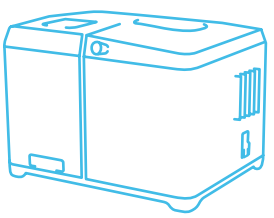


Atomic absorption spectrometers



Capillary electrophoresis systems

Lumex Instruments main product lines

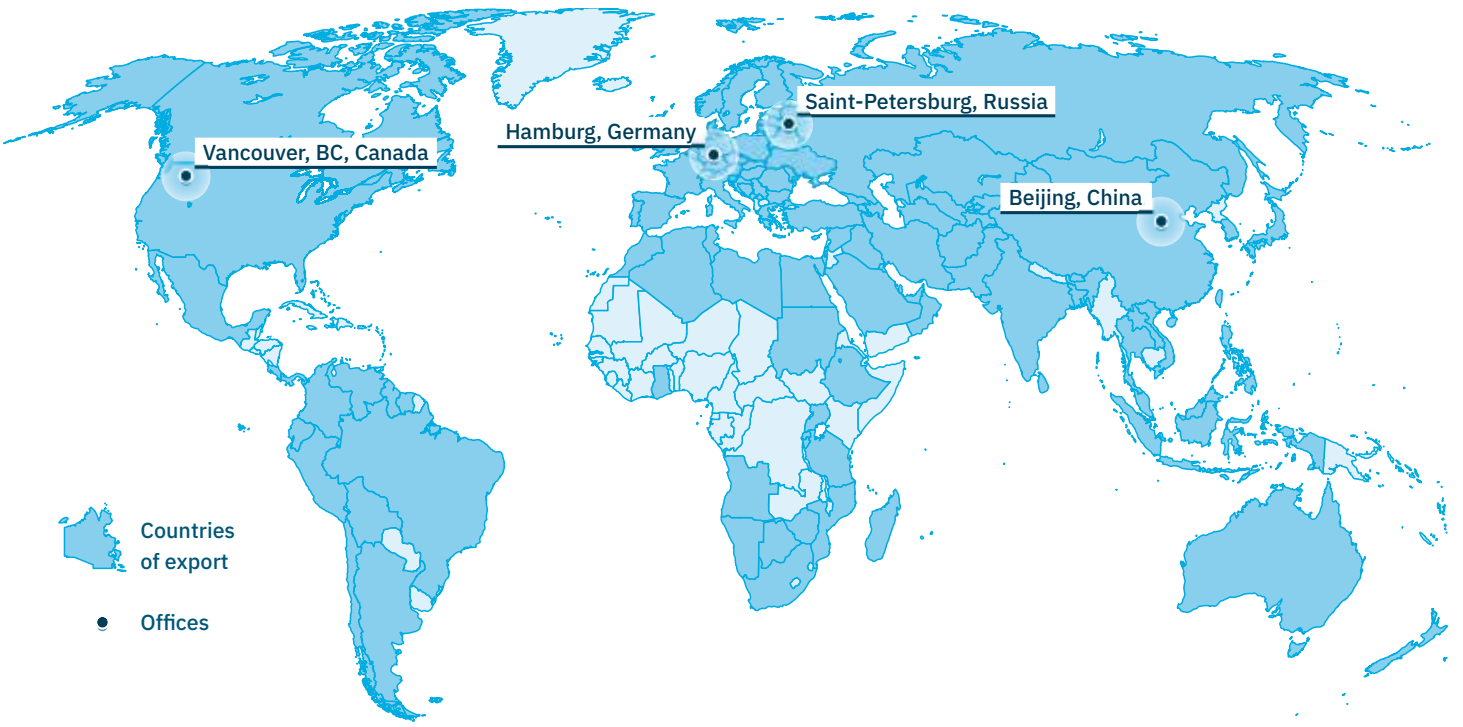


FTIR and NIR spectrometers

Fluorometers

PCR analyzers

Lumex Instruments worldwide



2 R&D and manufacturing sites

4 sales and support office

100+ authorized distributors globally

100+ countries of global sales

Facts and figures

30 years of experience

50+ patents worldwide

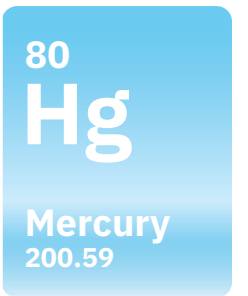
400+ employees (10 % PhD)

150+ applications/ methods

All of our innovations have been created to make analyses cost-effective, easy to run and instruments easy to maintain and repair. We are proud to deliver our products and services worldwide and also enjoy working with our valued customers and partners in many industries and various countries.

Solutions for mercury analysis

All Lumex Instruments mercury analyzers are highly selective and supersensitive instruments based on Zeeman atomic absorption spectroscopy (ZAAS) which enables fast, precise, and cost-effective mercury determination in any kind of media. RA-915 series mercury analyzers do not require any chemicals and compressed gases for the operation. Most of the samples are analyzed directly avoiding time-consuming sample preparation. Robust design, low running and maintenance costs are the distinctive features of the instruments.



ZEEMAN AAS ADVANTAGES

- Universal solution for laboratory, field, and industrial applications
- Low detection limit, highest selectivity
- Uniquely broad analytical range
- Direct analysis, no sample preparation for most of the sample types
- Low running and maintenance costs

Mercury is a highly mobile, persistent, and toxic pollutant arising from various natural and anthropogenic sources. It has to be analyzed in a wide diversity of solid, liquid, biological, and gaseous samples.

VARIETY OF APPLICATIONS

Matrix / Samples	Configuration of the equipment
Ambient air	RA-915M, Light-915, RA-915AM
Solid samples (soils, rocks, sediments)	RA-915Lab, RA-915M with PYRO-915+
Coal and other solid fuels	
Oil and oil products	
Biological samples (tissues, blood, hair, etc.)	
Foodstuff, animal feeding, raw materials	
Stack gases with sorbent traps	
Water, aqueous solutions, ppb +	
Water, aqueous solutions, ppt +	RA-915M with RP-92 (Cold Vapor)
Biological samples (urine)	
Hydrocarbon gas and other gases	RA-915M with RP-91NG, RA-915AMNG
Hydrocarbon gas with sorbent traps	RA-915M with PYRO-915+

RA-915Lab

Laboratory mercury analyzer

RA-915Lab is an automated laboratory mercury analyzer with an optional 45-position autosampler. It provides fast and accurate analysis of any kind of solid and liquid samples by direct thermal decomposition. The unique real-time temperature control system enables optimal analysis processing avoiding any interferences or memory effects no matter how high the concentration is.

APPLICATIONS

The analyzer is used for direct mercury determination in:

- Soils, rocks, ores
- Coal
- Crude oil, naphtha
- Food
- Biosamples (tissues, hair, blood, urine)
- Drugs and cosmetics
- Sorbent traps and absorbents
- Fertilizers
- Wastewaters
- and many other materials

Mercury determination with RA-915Lab analyzer complies with the globally adopted standards based on direct thermal decomposition, such as:

- US EPA 7473, 30B, PS12B
- ASTM D6722, D7622
- EN/TS 17286
- SN/T 4429.2-2016
- HJ 923-2017
- GOST R 54639-2011, 59176-2020
- and other standards

RA-915Lab without autosampler for manual mode

FEATURES & ADVANTAGES

- No sample preparation, no compressed gases
- Fast direct analysis of solids, liquids, and biosamples
- Low limit of detection, high selectivity
- Stable calibration
- Optional autosampler for 45 positions
- Automatic closed-loop temperature control system
- Unique dynamic measurement range, no memory effect
- Real-time control of selective and non-selective absorbance
- Programmable furnace for optimal samples decomposition and mercury thermospeciation study
- Low running and maintenance costs

PRINCIPLE OF OPERATION

A weighed sample is introduced into the RA-915Lab furnace by autosampler or manually. The sample is decomposed according to programmable temperature mode, and gaseous products are carried by purified (mercury-free) air into a heated analytical cell.

SPECIFICATIONS

Detection limit	0.2 µg/kg
Measurement range	0–10 000 mg/kg
Sample weight/volume	up to 5 000 mg / up to 2 800 µl
Temperature range	50–950 °C
Analysis time	1–5 min
Autosampler	45 positions
Power supply	110–242 VAC, 50/60 Hz, 2000 W
Dimensions, weight	450 × 840 × 460 mm, 57 kg 450 × 490 × 460 mm, 40 kg without autosampler

RA-915M

Universal Zeeman mercury analyzer

RA-915M is a supersensitive and highly selective analyzer that allows real-time mercury measurement in ambient and indoor air. The working range is from 0.5 to 200 000 ng/m³. The instrument's portable design enables indoor and outdoor operation. The analyzer has a built-in battery, test cell, and data logger.

APPLICATIONS

RA-915M is used for background monitoring, air mercury surveys including continuous measurements from vehicles, indoor and outdoor pollution detection and mapping, demercurization control, occupational health and safety, etc. Direct air mercury measurement complies with EN 15852 standard.

RAPID SOFTWARE FOR MERCURY ANALYZERS

RAPID is a powerful and user-friendly software for **RA-915M** and **RA-915Lab** mercury analyzers operation. It has facilities for data acquisition, reporting, and self-diagnostics both for online air/gas monitoring and sample analysis.

- Multiple ready-to-use programmed modes enable optimal treatment of any type of samples. Closed-loop automatic temperature adjustment system provides analysis of complex-matrix samples or highly contaminated samples with no data loss.
- Thermoscanning function gives information about mercury forms (free/absorbed/chemically bounded) in samples.
- RAPID software fully complies with FDA 21 CFR Part 11 requirements.

FEATURES & ADVANTAGES

- Direct continuous measurement; no traps, no compressed gases
- Ultra-low detection limit and highest selectivity
- Wide dynamic measuring range (six orders of magnitude)
- Stable calibration
- Auto zero function and self-diagnostic with a built-in test cell
- Robust design for laboratory and field applications
- Data logger for 122 hours of data acquisition, averaging, and storage
- Rechargeable battery for up to 12 hours operation

SPECIFICATIONS

Detection limit	0.5 ng/m³
Measurement range	0–200 000 ng/m³
Analysis time	Direct real-time
Response time	1 sec
Power supply	90–240 VAC, 50/60 Hz, 12 VDC, 40 W
Dimensions, weight	470 × 110 × 210 mm, 7 kg

LIGHT-915

A compact version of the mercury analyzer is specially designed for operation in a highly contaminated environment.
The measurement range from 0.1 to 3 000 µg/m³ provides rapid air mercury workplace monitoring, pollution mapping, revealing of contaminated wastes and equipment, etc.

Being combined with dedicated attachments, RA-915M analyzer is used for mercury determination in a wide range of objects, such as solid, liquid, biological samples, and natural gas. RA-915M-based sets can be used in stationary and field laboratories.

RA-915M with PYRO-915+ attachment is a versatile tool for fast selective analysis of all kinds of solid, liquid, and biological samples by direct thermal decomposition. The samples are analyzed 'as is', without pre-treatment. No compressed gases are required. The measurement range is 2–200 000 µg/kg, a routine analysis takes 1–2 min. Programmable furnace enables optimal conditions for samples decomposition and study of the mercury thermospecies having various binding energy with the sample matrix.

The technique of direct analysis complies with ASTM D6722, D7622, EN/TS 17286, US EPA 7473, 30B, PS12B, SN/T 4429.2-2016, HJ 923-2017, GOST R 54639-2011, 59176-2020, and other standards.

RA-915M with RP-91NG attachment provides direct determination of mercury concentration in hydrocarbon gases sampled from a pipeline, cylinder, or Tedlar® bag. Analysis is performed continuously in a gas flow without preliminary accumulation on a gold trap. The technique covers a full range of mercury concentrations in natural gas from ng/m³ to mg/m³ level. The highest selectivity of Zeeman technique enables direct real-time analysis of complex gases.

RA-915M with RP-92 attachment implements conventional Cold Vapor technique for mercury determination in liquid samples such as water and aqueous solutions, urine, aqueous, and other extracts. A wide working range is achieved by using either the multipath cell or the single-path cell of RA-915M analyzer.

Cold Vapor technique complies with ISO 12846:2012, EPA 245.1, ASTM D3223-12, AOAC 977.22, GOST 31950-2012, and other standards.

SPECIFICATIONS

	PYRO-915+ attachment	RP-92 attachment	RP-91NG attachment
Detection limit	0.5 µg/kg	0.1 ng/l	0.5 ng/m³
Sampling	up to 1000 mg up to 500 µl	1–20 ml	1–10 l/min
Analysis time	1–5 min	1–2 min	Direct online
Power supply	100–240 VAC, 50/60 Hz, 700 W	100–240 VAC, 50/60 Hz, 20 W	100–240 VAC, 50/60 Hz, 35 W
Dimensions, weight	430 × 340 × 135 mm (thermal unit) 400 × 280 × 135 mm (power supply unit), 17.5 kg	360 × 225 × 125 mm, 7 kg	320 × 290 × 160 mm, 6.5 kg

RA-915AM/AMNG

Continuous mercury analyzers

RA-915AM/AMNG online mercury monitors are designed for direct continuous mercury determination in air or hydrocarbon gases, respectively. The monitors have a wide working range covering six orders of magnitude from background level below 1 ng/m³.

RA-915AM mercury monitor is used for fully automated mercury measurement in ambient and indoor air. The monitor is mainly used for stationary long-term observations and also can be mounted in moving vehicles.
Optional multiplexer enables air sampling from 2 to 16 points.
Direct ZAAS measurement technique complies with EN 15852 standard method.

RA-915AMNG mercury monitor is designed for continuous online monitoring of mercury in natural hydrocarbon gas. The measurement is performed directly in a gas flow of 4–10 l/min. The monitor covers the full range of the mercury concentrations in raw and processed hydrocarbon gases and can be used for mercury monitoring in pipelines, control of mercury removal units (MRU), control of gas cleaning before liquefaction.

FEATURES & ADVANTAGES

- Direct continuous measurements
- No pre-concentration on sorbent traps
- Low detection limit and wide measurement range
- Highest selectivity
- No chemicals, no carrier and zero gases
- Low maintenance
- Long-term calibration stability (for years)
- Automatic zero drift and span drift correction
- Built-in control and preventive maintenance functions
- Autorun function in case of power supply failures

SPECIFICATIONS	Range I, ng/m³	Range II, ng/m³	Range III, ng/m³
Measurement range	0–2000	0–150000	0–3000000
Limit of Detection	0.1	10	200
Air flow rate	7–10 l/min		
Analyzed air temperature	-20 to +40 °C		
Number of sampling points	1 (2–16 with multiplexer)		
Sampling line	up to 150 m		
Mounting	standard 19 inch rack		
Power supply	110/240 VAC, 50/60 Hz, 120 W		
Dimensions, weight	665 × 482 × 222 mm, 20 kg		

Mercury Measurement Toolkit

Stack gas sampling & analysis

Mercury Measurement Toolkit is designated for rapid and cost-effective measurement of mercury emissions from stationary sources: coal combustion, non-ferrous metallurgy, cement production, waste incineration, etc. The sampling and measurement method is based on sorbent traps. The Toolkit comprises the sampling system with a probe, sorbent traps, and the analyzer.

RA-915Lab analyzer or the set of **RA-915M with PYRO-915+** attachment are used for mercury determination in sorbent traps and other objects to be controlled for mercury content (coal, co-fired fuels, fly ash, gypsum, sludge, wastewater, etc.).

OLM30B is a dual train sampling system for stack gas sampling and analysis.

SORBENT TRAPS of various configurations are used for short- and long-term sampling, mercury speciation determination, sampling and analysis quality control.

FEATURES & ADVANTAGES

- Easy to use, maintain, and transport
- No special requirements for site preparation
- Compliant with US EPA Method 30B; HJ 917-2017; TS 17286:2019
- Versatility: analyses of stack gas (incl. Hg speciation), coal, ash, sludge, wastewater
- Wide dynamic measurement range: 0.5 to 50 000 ng mercury absolute
- Fast on-site analyses and results (2–10 minutes per sample)
- The most portable sampling system
- No compressed gases
- Low operating and maintenance costs
- QA/QC of stack gas sampling and analysis are incorporated in the method

Extraction of a known volume of flue gas is performed through paired in-stack sorbent traps at a fixed flow rate. After the sampling, the sorbent is removed and analyzed for mercury content.

The sorbent media is configured in a sorbent trap with at least two sections that should be tested separately: for the primary capture of gaseous mercury and for mercury breakthrough. Sorbent traps can be supplied with an additional spiked section. More sophisticated sorbent traps can include additional sections for oxidized and elemental mercury speciation and scrubber for acid gases.

Capel-205

Capillary electrophoresis system

Capel-205 is a capillary electrophoresis (CE) system intended for determination of a wide range of analytes in various types of samples, including water, soil, foodstuffs, fodders, and pharmaceuticals using all main modes of capillary electrophoresis.

APPLICATIONS

WATER

- Inorganic anions
  Cl^-, NO_2^-, SO_4^{2-}, NO_3^-, F^-, PO_4^{3-}
- Inorganic cations
  NH_4^+, K^+, Na^+, Li^+, Mg^{2+}, Sr^{2+}, Ba^{2+}, Ca^{2+}
- Bromide, Iodide
- Chlorite, Chlorate, Perchlorate

SOIL, SLUDGE, SEDIMENTS

- Inorganic and organic anions
- Inorganic cations

FEED, FEED RAW MATERIALS AND FODDER ADDITIVES

- Proteinogenous amino acids
- Inorganic anions and cations
- Organic acids
- Choline
- Ascorbic acid

FOOD AND BEVERAGES

- Organic acids
- Preservatives
- Sweeteners
- Sugars
- Inorganic anions and cations
- Aromatic aldehydes
- D-, L-isomers of tartaric and malic acids

PHARMACEUTICALS

- Proteins
- Peptides
- Enantiomers

- and many more

FEATURES & ADVANTAGES

- High separation efficiency
- Multiple components determination in one run
- Suitable for various types of analytes (ions, small molecules, proteins, enantiomers etc.)
- Liquid cooling of capillary ensures high reproducibility
- Fast analysis (separation takes 5–15 minutes)
- Simple sample pre-treatment (filtration, dilution, and degassing)
- Low analysis cost (nanoliters of reagents, cheap consumables)
- Dedicated Elforun software complies with FDA 21 CFR part 11
- IQ/OQ protocols

Capillary electrophoresis is based upon the differential migration of components of aqueous samples within a narrow fused silica capillary driven by an electric field. Separated components are detected and quantified by a highly sensitive UV detector.

SPECIFICATIONS

Detection wavelength	190–400 nm, light source — deuterium lamp
Analysis	Constant voltage, from -30 kV to +30 kV, Pressure, up to 100 mbar
Injection	By voltage, from -30 kV to +30 kV; by pressure, from -100 to 100 mbar
Rinsing	By pressure, 500–2 000 mbar in 1 mbar steps
Capillary	Length 30–120 cm, internal diameter 50/75 µm Liquid thermostating ±0.1 °C
Autosampler	for 59 standard Eppendorf-type 1.5 ml vials
Power supply	110–240 VAC, 50/60 Hz, 170 W
Dimensions, weight	470 × 530 × 410 mm, 30 kg

MGA-1000

Graphite Furnace Atomic Absorption Spectrometer

MGA-1000 is a graphite furnace atomic absorption spectrometer based on the patented Zeeman High Frequency Polarization Modulation (ZHFPM) technique. MGA-1000 is intended for determination of a wide range of elements in various types of samples (water, soil, foodstuffs, fodders, pharmaceuticals, etc.). The instrument provides high selectivity and sensitivity of the analysis.

APPLICATIONS

- **WATER**
- **SOIL, SLUDGE, SEDIMENTS**
- **FEED, FEED RAW MATERIALS, AND FODDER ADDITIVES**
- **FOOD AND BEVERAGES**
- **PHARMACEUTICALS**

FEATURES & ADVANTAGES

- Simultaneous measurement of total and background absorptions
- Quasi-double beam optics eliminate drifts and enable direct operation with no warm-up needed
- Compact and effective cooling system
- Smart 47-position autosampler
- Cold Vapor/Hydride Generation apparatus is available
- Stabilized temperature platform furnace (STPF) concept is implemented
- Bright Electrodeless Discharge Lamps (EDL) provide low detection limits and direct As and Se determination at levels from 1 ppb without hydride generation technique
- Easy-to-use routine analysis of Na, K, Mg, and Ca is possible
- Dedicated Eltherm software complies with FDA 21 CFR part 11
- IQ/OQ protocols

ELEMENTS

Li	Be								
Na	Mg	Al	Si	P					
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni
Cu	Zn	Ga	Ge	As	Se				
Rb	Sr	Y	Mo	Ru	Rh	Pd	Ag	Cd	In
Sn	Sb	Te							
Cs	Ba	Ir	Pt	Au	Hg	Tl	Pb	Bi	

SPECIFICATIONS

Wavelength range	185–900 nm
Furnace heating rate	up to 4 500 K/sec
Argon flow rate (high purity argon)	< 2 l/min
Maximal temperature of the furnace atomizer	3 000 °C
Typical tube lifetime	Up to 800 analysis cycles
Autosampler capacity	47 positions
Power supply	Three-phase 220/380VAC, 50/60 Hz or 120/208VAC, 50/60 Hz
Power consumption	0.1 kW in standby 6 kW in atomization mode
Dimensions, weight	800 × 475 × 310 mm, 50 kg

InfraLUM FT-08

FT mid-IR Spectrometer

InfraLUM FT-08 is a conventional Fourier Transform infrared spectrometer designed for measurement of transmission, attenuated total reflectance and diffuse reflectance spectra of liquid, solid, and gaseous micro- and macro-samples.

APPLICATIONS

PHARMACEUTICAL INDUSTRY

PLUBRICANTS AND OIL PRODUCTS TESTING

POLYMER MATERIALS TESTING

PAINTS AND COATINGS ANALYSIS

SEMICONDUCTOR MATERIALS TESTING

FORENSIC SCIENCE
SCIENTIFIC RESEARCH

ENVIRONMENTAL CONTROL

FEATURES & ADVANTAGES

- High signal-to-noise ratio
- High resolution
- Built-in smart total self-diagnostics system
- Hermetically sealed optical compartment with the automated moisture monitoring system
- Fully compatible with PIKE Technologies® and Specac® accessories
- Dedicated SpectraLUM software complies with FDA 21 CFR part 11
- IQ/OQ protocols

SPECIFICATIONS

Spectral range	8 000–350 cm^{-1} (KBr optics) 8 000–500 cm^{-1} (ZnSe optics)
RMS signal-to-noise ratio	> 60 000 (4 cm^{-1}, 1 min)
Variable resolution	0.5, 1, 2, 4, 8, 16 cm^{-1}
Wavenumber accuracy	±0.05 cm^{-1}
Power supply	110/220 V, 50/60 Hz, 65 W
Dimensions, weight	580 × 550 × 340 mm, 32 kg

InfraLUM FT-12

FT NIR analyzer

InfraLUM FT-12 NIR analyzer performs express analysis of various agricultural and food products enabling simultaneous determination of main parameters with the highest accuracy possible. The analysis is non-destructive and usually does not require any sample preparation. A model with automatic cell filling for the analysis of whole grains is also available.

CALIBRATIONS

- **CEREALS**
  protein, moisture, fat, fiber, starch
- **OILSEEDS AND LEGUMES**
  protein, moisture, fat
- **MEAL, OILCAKE, etc.**
  protein, moisture, oil content, fiber, ash, phosphorus
- **FLOUR**
  protein, moisture, whiteness, ash
- **FEED, FEED RAW MATERIALS, AND FODDER ADDITIVES**
  protein, moisture, oil content, fiber, ash, phosphorus, amino acids
- **MEAT, FISH**
  protein, moisture, fat
- **DAIRY PRODUCTS**
  protein, fat, lactose, acidity, dry substance
- **SAUCES**
  protein, fat, dry substance, acidity
- **WINE**
  alcohol, sugars, acids, total sulfur dioxide, modified extract, pH
- **VEGETABLE OIL**
  phosphorus-containing substances, acidity index, moisture
- and many more

FEATURES & ADVANTAGES

- Simultaneous determination of all parameters of interest within 1.5 minutes
- Highest accuracy of results provided by the use of Fourier transform NIR spectrometry
- Whole grain analysis with no sample preparation
- No reagents or consumables required
- Waterproof and dustproof optical compartment of the interferometer
- Dedicated SpectraLUM/PRO software complies with FDA 21 CFR part 11
- IQ/OQ protocols

SPECIFICATIONS

Analysis time	1.5 min
Spectral range	13 200–8 700 cm^{-1} (760–1 150 nm)
Resolution	8, 16, 32, 64 cm^{-1}
Power supply	110/220 V, 50/60 Hz, 110 W
Dimensions, weight	530 × 450 × 380 mm, 32 kg

Fluorat-02

Fluorometric & photometric analyzer

Fluorat-02 is a multifunctional filter fluorometer intended for a quantitative analysis of different types of samples, including water, soil, and food. This instrument determines a wide range of analytes based on fluorescence, chemiluminescence, phosphorescence, and photometry techniques.

APPLICATIONS

WATER

- Aluminium
- Anionic surfactants
- Arsenic
- Chemical Oxygen Demand
- Fluorescein
- Nitrites
- Selenium
- Total petroleum hydrocarbons
- Uranium
- Zinc

SOIL

- Total petroleum hydrocarbons

FOOD AND FEED

- Vitamin B1 (thiamine)
- Vitamin B2 (riboflavin)
- Selenium

PHARMACEUTICAL

- Aluminium

FEATURES & ADVANTAGES

- Low detection limits
- Fast analysis with low reagent consumption
- Capable of determination of a large variety of analytes
- COD-analyzer (Chemical Oxygen Demand), when equipped with Termion thermoreactor
- Dedicated FluoRate software complies with FDA 21 CFR part 11
- IQ/OQ protocols

SPECIFICATIONS

Wavelength range (filter selection)	250–650 nm (Fluorat-02-4M) 250–900 nm (Fluorat-02-5M)
Types of cells	quartz (L = 10 mm) glass vials for COD
Power supply	110–240 VAC, 50/60 Hz, 36 W
Dimensions, weight	305 × 320 × 110 mm, 6.5 kg

AriaDNA

Microchip-based real-time PCR analyzer

AriaDNA real-time PCR analyzer provides highly specific and sensitive qualitative and quantitative nucleic acids analysis in various samples. Microchip real-time PCR technique with the extremely fast heating and cooling device performs rapid amplification and analysis in micro-volumes, ensuring appropriate sensitivity for medical and other applications.

APPLICATIONS

VETERINARY

- Avian Influenza virus and pathogens
- Cattle diseases pathogens
- African swine fever
- Fish disease pathogens

AGRICULTURE, FOOD SAFETY

- Pathogens in raw and processed food
- Genetically modified lines
- Grapevine diseases
- Potato bacterial and viral pathogens

CLINICAL DIAGNOSTICS, HEALTHCARE

- COVID-19 detection systems, incl. saliva samples
- Influenza A, Influenza B
- SNPs in human genome (Thrombophilia, Warfarin)
- Sexually transmitted infections (STI)

- and many more

FEATURES & ADVANTAGES

- Short PCR-runtime due to high thermocycling rate
- Low detection limit
- Low sample and reagents consumption
- Simultaneous qualitative and quantitative DNA/RNA analysis
- Flexibility and customization
- Small footprint and low energy consumption
- Dedicated software complies with FDA 21 CFR part 11

SPECIFICATIONS

Rate of thermal cycling	heating: 12 °C/s cooling: 10 °C/s
Minimum DNA content in microreactor	1–5 DNA copies
Total PCR analysis time (45 cycles)	from 20 min
Number of microreactors on a microchip	30, 48
Reagents required per analysis	0.5–1.8 µl
Detection channel 1, dye	FAM, SYBR Green I
Detection channel 2, dye	ROX, Cy5
Power supply	90–240 VAC, 50/60 Hz, 100 W
Dimensions, weight	250 × 300 × 190 mm, 5 kg

MICROCHIPS

A microchip is a thin plate made of heat-conducting material with tiny wells — microreactors. There are two formats of microchips:

- Preloaded microchips with lyophilized PCR reagents (ready-to-use) are designed for specific applications in the areas of medicine, veterinary, and agriculture.
- Empty microchips can be used by the end-user for a number of customized applications with any compatible third-party PCR kits. PCR mixtures of reagents and samples can be added into microreactors in the same way as in a test tube.

Find your local Lumex Instruments distributor:
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