

**PROGRAM**  
**VI<sup>th</sup> INTERNATIONAL SCIENTIFIC AND TECHNICAL CONFERENCE**  
**«METROLOGY OF PHYSICAL AND CHEMICAL MEASUREMENTS»**

**DATES & VENUE:** September 05-08, 2023, Park-Hotel “Morozovka”, Moscow region, Russia

**REGISTRATION:** From 09<sup>30</sup> to 10<sup>00</sup>, 05 September 2023

05 September, 2023 (Tuesday)	
10:00-10:15	<b>Conference opening</b>
10:15-10:45	<b>E. Lazarenko</b> <i>The main objectives of the development of the system for ensuring the uniformity of measurements in Russian Federation</i> ROSSTANDART, Moscow, Russia
10:45-11:00	<b>V. Dobrovolskiy, N. Oganyan</b> <i>Advances of the Research Department on Physicochemical and Electrical Measurements of VNIIFTRI</i> VNIIFTRI, Moscow region, Russia
11:00-11:15	<b>N. Oganyan, V. Dobrovolskiy</b> <i>Challenges to ensure the international traceability under current conditions</i> VNIIFTRI, Moscow region, Russia
11:15-11:30	<b>A. Krylov, A. Mikheeva</b> <i>Physical and Chemical measurements: characteristics of the composition and properties of the systems</i> D.I. Mendeleev Institute for Metrology (VNIIM), Saint-Petersburg, Russia
<b>11:30-12:00 Coffee break, the Main building, 1<sup>st</sup> floor</b>	
12:00-12:45	<b>Samuel Wunderli</b> <i>Linear regression parameters with associated uncertainties in the stimulus <math>X_i</math> and the response <math>Y_i</math> using a Monte-Carlo approach for calibrations</i> atomolmetrion GmbH, independent expert on metrology, Switzerland
12:45-13:00	<b>E. Sobina, O. Kremleva, V. Studenok, V. Sushkevich</b> <i>Review of new international documents on RM activities. Plans for implementation in national standardization documents</i> UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia
13:00-13:15	<b>S. Medvedevskikh<sup>1</sup>, R. Teteruk<sup>2</sup></b> <i>Methods for determining the intervals between validations of measuring instruments</i> D.I. Mendeleev Institute for Metrology (VNIIM), Saint-Petersburg, Russia
13:15-13:30	<b>P. Migal</b> <i>Practical aspects of adjusting the measuring instruments between calibrations intervals</i> UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia
<b>13:30-14:30 Lunch, the Main building, 2<sup>nd</sup> floor</b>	
14:30-14:45	<b>A. Ivanov</b> <i>Improvement of the State Primary Standard of mass (molar) units fraction and mass (molar) concentrations of components in liquid and solid substances and materials based on spectral methods</i> VNIIOFI, Moscow, Russia
14:45-15:00	<b>A. Stakheev, V. Dobrovolskiy, T. Stolboushkina</b> <i>About State Primary Standard of unit of the mass concentration of oxygen, hydrogen and carbon dioxide in liquid media</i> VNIIFTRI, Moscow region, Russia
15:00-15:15	<b>A. Ivanov, N. Gryazskikh, M. Chugunova, E. Polunina</b> <i>Revision of the State Verification Scheme for mass (molar) measuring instruments fraction and mass (molar) concentrations of components, as well as fluorescence in liquid and solid substances and materials based on spectral methods</i> VNIIOFI, Moscow, Russia
15:15-15:35	<b>O. Kremleva, E. Sobina, V. Studenok, V. Suslova</b> <i>Possibilities of State Primary Standards for demonstration of metrological traceability of COs</i> UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia

15:35-15:55	<b>A. Kolobova</b> <i>Ensuring the traceability of certified reference materials of gas mixtures composition produced in Russian Federation</i> D.I. Mendeleev Institute for Metrology (VNIIM), Saint-Petersburg, Russia
15:55-16:00	<b>Q&amp;A</b>
<b>16:00-16:30</b>	<b>Coffee break, the Main building, 1<sup>st</sup> floor</b>
16:30-16:50	<b>E. Kulyabina<sup>1</sup>, T. Kulyabina<sup>1</sup>, V. Morozova<sup>1,2</sup>, V. Morozov<sup>3</sup></b> <i>Support of metrological traceability of the results of measurements and studies of the properties of proteins and nucleic acids</i> <sup>1</sup> VNIIMS, Moscow, Russia, <sup>2</sup> Fresno State University, Fresno, California, USA, <sup>3</sup> AO Volga, Balakhna, Nizhny Novgorod Region, Russia
16:50-17:10	<b>E. Vostroknutova, T. Tabatchikova, E. Lebedeva, P. Migal, E. Sobina, A. Sobina</b> <i>Development of the State Primary Reference procedure for measuring the mass fraction of copper and zinc in the blood serum by the method of isotope dilution and mass spectrometry with inductively coupled plasma and reference materials on its basis</i> UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia
17:10-17:30	<b>A. Ivanova, I. Maksakova, N. Yurlova, V. Zirina, A. Mikheeva, A. Krylov</b> <i>Methodological and metrological support for the control of flotation reagents based on aliphatic alkoxyamines in technological media and waste from iron ore enrichment processes</i> D.I. Mendeleev Institute for Metrology (VNIIM), Saint-Petersburg, Russia
17:30-18:00	<b>Q&amp;A</b>
18:15	<b>Transfer from the Main building to metro station “Khovrino”</b>

<b>06 September, 2023 (Wednesday)</b>	
10:00-10:15	<b>A. Aprelev, E. Davydova, V. Smirnov</b> <i>Study on the possibilities of using the indicator "Sad" for the quantitative determination of the sulfur content in fuel</i> VNIIFTRI, Moscow region, Russia
10:15-10:30	<b>D. Kartashov</b> <i>Features of the study of liquid samples using the EPR method</i> VNIIFTRI, Moscow region, Russia
10:30-10:45	<b>V. Baranovskaia, M. Doronina, G. Mar'ina</b> <i>Methodological and metrological aspects of the spectral analysis of prospective materials</i> IGIC RAS, Moscow, Russia
10:45-11:00	<b>D. Korney, M. Melnik</b> <i>Modern, high -tech equipment for environmental control, quality control and safety of various products</i> LLC Energolab, Moscow, Russia
11:00-11:15	<b>T. Stolboushkina, A. Stakheev</b> <i>Sample preparation procedures on the determination of metals of beef liver by the spectroanalytical methods</i> VNIIFTRI, Moscow region, Russia
11:15-11:30	<b>A. Saakyan, A. Levin</b> <i>A software package for spectral data processing by chemometrics and machine learning methods</i> VNIIOFI, Moscow, Russia
<b>11:30-12:00</b>	<b>Coffee break, the Main building, 1<sup>st</sup> floor</b>
12:00-12:15	<b>A. Kolpakov, N. Kuznetsov, L. Safonova, N. Muravskaya</b> <i>Development of a method for preparation of test objects immitting the optical properties of biotise</i> BMSTU, Moscow, Russia
12:15-12:30	<b>L. Zhorina, G. Zmievskaya, I. Matveev</b> <i>Measuring the dose absorbed by a photosensitizer with uneven sample illumination</i> BMSTU, Moscow, Russia

12:30-12:45	<b><u>D. Korney, M. Melnik</u></b> <i>Scanning probe microscopy - basic aspects</i> LLC Energolab, Moscow, Russia
12:45-13:00	<b><u>E. Zabelina, N. Kozlova</u></b> <i>Experimental-metrological complex for testing and control of optical characteristics of single-crystals and stock on their base</i> NUST MISIS, Moscow, Russia
13:00-13:15	<b><u>N. Kozlova, E. Zabelina</u></b> <i>Metrological quality assurance of measurements of parameters of monocrystalline materials and their elements</i> NUST MISIS, Moscow, Russia
13:15-13:30	<b><u>V. Kazakova</u></b> <i>Calculation method for determining the equilibrium constants of lead oxidation and water vapor formation reactions in the temperature range from 350 to 700 °C</i> VNIIFTRI, Moscow region, Russia
<b>13:30-13:45</b>	<b>Photo session, in front of the main building</b>
<b>13:45-14:30</b>	<b>Lunch, the Main building, 2<sup>nd</sup> floor</b>
14:30-14:45	<b><u>I. Aronov</u></b> <i>Increasing the accuracy of measurements of the absolute gas permeability coefficient</i> UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia
14:45-15:00	<b><u>A. Samorodov</u></b> <i>Propagation of uncertainty in biotechnical systems for automated biomedical microscopy</i> BMSTU, Moscow, Russia
15:00-15:15	<b><u>A. Druchinin</u></b> <i>Arrangement and implementation of interlaboratory comparisons (ILC) either for proficiency testing of laboratories upon unique facilities and test methods or for providing the equipment admission</i> All-Russian Research Institute of Oil Refining, Moscow, Russia
15:15-15:30	<b><u>D. Falkin</u></b> <i>Practice of an ensuring metrological traceability by laboratories of industrial enterprises</i> Association "Competence and Quality", Samara, Russia
15:30-15:45	<b><u>S. Sherstobitov, M. Karpova</u></b> <i>On electrometric methods for measuring low currents</i> VNIIFTRI, Moscow region, Russia
15:45-16:00	<b><u>A. Sobina</u></b> <i>Certified reference materials and reference standards of pure salts being characterized by the main component content using GET 176 – an important link in ensuring metrological traceability of analytical measurements</i> UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia
<b>16:00-16:30</b>	<b>Coffee break, the Main building, 1<sup>st</sup> floor</b>
16:30-16:45	<b><u>M. Bednova, A. Strelnikov, N. Sinelnikova, N. Ivannikova</u></b> <i>Current status and prospects for the development of metrological support for measurements of the relative electrical conductivity and salinity of sea water in hydrological investigations</i> D.I. Mendeleev Institute for Metrology (VNIIM), Saint-Petersburg, Russia
16:45-17:00	<b><u>A. Dubinchik, I. Lomakina</u></b> <i>Issues to transmit units of quantities to measurement instruments of ion activity</i> Rostest-Moscow, Moscow, Russia
17:00-17:15	<b><u>S. Prokunin, V. Dobrovolskiy, D. Vengina</u></b> <i>Expanding the measuring capacities of the State Primary Standard of the pX activity ions in aqueous solutions</i> VNIIFTRI, Moscow region, Russia
17:15-17:30	<b><u>D. Vengina, S. Prokunin, V. Dobrovolskiy</u></b> <i>Evaluation of the uncertainty budget for hydrogen measurements by the primary method</i> VNIIFTRI, Moscow region, Russia
17:30-17:45	<b><u>T. Alimova, S. Prokunin, V. Dobrovolskiy, Yu. Ovchinnikov</u></b> <i>Support of traceability of measurements of specific electrical conductivity of liquid media in the range from 0.001 to 10 S/m</i>

	VNIIFTRI, Moscow region, Russia
17:45-18:00	<b>Q&amp;A</b>
18:15	<b>Transfer from the Main building to metro station “Khovrino”</b>
19:00	<b>Official dinner, the large banquet hall, the Main building, 2<sup>nd</sup> floor</b>
<b>07 September, 2023 (Thursday)</b>	
10:00-10:15	<b>A. Priadka</b> <i>Results of studies of a fine medium on the outer surface of the ISS</i> VNIIFTRI, Moscow region, Russia
10:15-10:30	<b>D. Averkin</b> <i>Effect of surfactants on the polydispersity of a suspension of polystyrene latex spheres</i> VNIIFTRI, Moscow region, Russia
10:30-10:45	<b>K. Zarechnov, A. Kolobova, T. Sokolov, L. Konopelko</b> <i>Problems of metrological support automatic measurement systems parameters of industrial emissions</i> D.I. Mendeleev Institute for Metrology (VNIIM), Saint-Petersburg, Russia
10:45-11:00	<b>P. Aleksandrov<sup>1</sup>, A. Aleksandrova<sup>2</sup>, E. Antonov<sup>2</sup>, V. Ilyin<sup>3</sup>, V. Kalechits<sup>1</sup>, I. Kovbasyuk<sup>1</sup>, O. Maslakov<sup>1</sup>, N. Usanova<sup>3</sup>, E. Khozyasheva<sup>1</sup>, M. Shakhov<sup>1</sup></b> <i>The Research of Aerosol and Microscope Fungi Accumulation Dynamics inside the Air of a Hermetic Inhabited Facility during the Cycle of Isolation Experiments SIRIUS-19</i> <sup>1</sup> National Research Centre «Kurchatov Institute», Moscow, Russia <sup>2</sup> Moscow State University, Moscow, Russia <sup>3</sup> Russian State Research Center Institute of Biomedical Problems RAS (IBMP), Moscow, Russia
11:00-11:15	<b>D. Belenkii, T. Magomedov</b> <i>Necessity of standard reference materials development for ensuring the particle number concentration in fluids measurement uniformity</i> VNIIFTRI, Moscow region, Russia
11:15-11:30	<b>V. Studenok<sup>1</sup>, E. Sobina<sup>1</sup>, O. Kremleva<sup>1</sup>, P. Migal<sup>1</sup>, P. Aronov<sup>1</sup>, V. Firsanov<sup>1</sup>, S. Medvedevskikh<sup>2</sup></b> <i>Overview of algorithms for estimation of the homogeneity of reference materials</i> <sup>1</sup> UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia <sup>2</sup> D.I. Mendeleev Institute for Metrology (VNIIM), Saint-Petersburg, Russia
<b>11:30-12:00</b>	<b>Coffee break, the Main building, 1<sup>st</sup> floor</b>
12:00-12:20	<b>V. Tenishev</b> <i>Stability of absorbed dose reference materials over time, their dependence on radiation energy and AD rate</i> VNIIFTRI, Moscow region, Russia
12:20-12:40	<b>M. Krasheninina</b> <i>On the progress of development of certified reference material of food acids composition</i> UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia
12:40-13:00	<b>O. Golynets<sup>1,2*</sup>, E. Kochetkova<sup>2</sup></b> <i>Selection of material for creating a reference material on the basis of waste from mining and combustion of coal</i> <sup>1</sup> UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia <sup>2</sup> NUST MISIS, Moscow, Russia
13:00-13:15	<b>K. Shatnyh, A. Schleining</b> Reference materials of precious metals and alloys based on them Kraztztmet, Krasnoyarsk, Russia
13:15-13:30	<b>Q&amp;A</b>
<b>13:30-14:15</b>	<b>Lunch, the Main building, 2<sup>nd</sup> floor</b>
14:15-18:00	<b>Socio-cultural program. Excursion</b>
<b>18:45</b>	<b>Transfer from the Main building to metro station “Khovrino”</b>

<b>08 September 2023 (Friday)</b>	
10:00-11:30	Round table on the development and improvement of the reference base
<b>11:30-12:00</b>	<b>Coffee break, the Main building, 1<sup>st</sup> floor</b>
12:00-13:30	Round table on regulatory and technical documentation
<b>13:30-14:30</b>	<b>Lunch, the Main building, 2<sup>nd</sup> floor</b>
15:30-15:00	<b>Discussion and adoption of the Conference Decisions. Closing of the Conference</b>
15:30	<b>Transfer from the Main building to metro station "Khovrino"</b>

<b>Foyer of the Main building</b>	
<b>5-8 September, 2023</b>	
<b>Posters</b>	
<b>A. Bagdun, D. Ivashenko</b>	
<i>Preliminary results of testing reference materials for particle size</i>	
BelGIM, Minsk, Belarus	
<b>O. Rutenberg<sup>1</sup>, S. Vikhrova<sup>1</sup>, A. Smirnov<sup>2</sup>, T. Barinskaya<sup>2</sup></b>	
<i>Research and development of the blood certified reference material containing low molecular weight alcohols and acetone</i>	
<sup>1</sup> VNIMS, Moscow, Russia	
<sup>2</sup> GBUZ "MNPC Narcology DZM", Moscow, Russia	
<b>M. Shakhov, I. Sotnikov, P. Alexandrov</b>	
<i>Experimental setup for studying the adsorption of iodine on the constructing materials from the gas phase</i>	
NRC «Kurchatov Institute», Moscow, Russia	
<b>A. Sergeeva, A. Kasilyunas, O. Golynets</b>	
<i>The progress of development of certified reference material for composition of chocolate</i>	
UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia	
<b>M. Krasheninina<sup>1*</sup>, O. Pervukhina<sup>1</sup>, P. Petukhov<sup>2</sup>, V. Maigurova<sup>2</sup></b>	
<i>On the development and certification of methods for the quantitative determination of the amount of casein in food products</i>	
<sup>1</sup> UNIIM – Affiliated Branch of the VNIIM, Yekaterinburg, Russia	
<sup>2</sup> XEMA LLC, Moscow, Russia	
<b>DEMONSTRATION OF EXHIBITS</b>	
VNIIFTRI	
LLC Energolab	
LLC Industrial Environmental Laboratories	
Scientific and technical peer-reviewed journal "ANALYTICS"	