



6th Scientific Conference on Protection against CBRN Agents

HAZMAT PROTECT 2026

National Institute for NBC Protection, Kamenna, Czech Republic
September 16th – 17th 2026

PROGRAMME

16th September 2026

- 9.30 – 11.35 Welcome opening and plenary presentations**
- 9.40 – 10.05 **Response, solutions, and protection against CBRN and HAZMAT threats from the perspective of the Fire Rescue Service of the Czech Republic**
Ing. Jiří Matějka, MI-GD of Fire Rescue Service of the CR, Prague
- 10.05 – 10.30 **Perspectives on establishing chemical disarmament control capacity in Finland**
Dr. Markku Messilakso, Association for Rescue, Protection, Security and Safety, Finland
- 10.30 – 10.55 **Volunteer sector as support in disturbances of society**
MSc. Timo Lukkarinen, Association for Rescue, Protection, Security and Safety, Finland
- 10.55 – 11.20 **Challenges of CW alleged usage evidence collection in non-permissive, high temperature environment**
Boban Cekovic, Nonwovenn, U.K.
- Discussion**
- 11.35 – 11.50 Coffee break**
- 11.50 – 12.35 Short presentations (2-3 min) – exhibitors, posters**
- Metrohm ČR, Nonwovenn, Chromservis s. r. o., RMI s. r. o., Nicolet CZ s. r. o., BAS Rudice s. r. o., INGOS s. r. o., Dekonta a. s., PW Krystian s. r. o., Pohorelec s. r. o., Starmans Electronics s. r. o.
- Detection of risk and highly risk B-agents using drop digital PCR**
Mgr. Kateřina Mašková, National Institute for NBC Protection, Kamenna
- ICRR 2027 in the Czech Republic: Join world-leading radiation science and shape the future of radiobiology**
RNDr. Iva Falková, Ph.D., Institute of Biophysics of CAS, Brno
- Internal dosimetry and decorporation kinetics of cesium-137 and cobalt-60 using nano-prussian blue in a murine model**
Ing. Erik Rajchl, University of Defence, Vyskov

Monitoring the response to physical strain and heat stress in persons wearing PPE by means of electrodermal activity

RNDr. Michal Mašín, Ph.D., National Institute for NBC Protection, Kamenna

12.35 – 13.35 Lunch

13.35 – 14.00 Company Exhibitions + Poster Session

14.00 – 14.30 Prevention – training and education

Global education and training in chemical safety

14.00 – 14.15

Ing. Ladislava Navrátilová, Ph.D., MI-GD of FRS CR, Public Protection Institute Lazne Bohdanec

14.15 – 14.30

Practical experience and knowledge on extinguishing white phosphorus

Mgr. Pavel Kukleta, FRS of South Moravia Region

14.30 – 15.35 Effect of hazardous substances on organism

14.30 – 14.45

Integrated autoinjector solutions for operational medicine and CBRN emergency response

prof. Ing. Kamil Kuča, Ph.D., University of Hradec Kralove

14.45 – 15.00

DNA damage by different types of ionizing radiation

doc. RNDr. Martin Falk, Ph.D., Institute of Biophysics of CAS Brno

15.00 – 15.15

A set of methods for biological and physical retrospective dosimetry in radiation emergencies

prof. MVDr. Zuzana Šinkorová, Ph.D., University of Defence, Hradec Kralove

15.15 – 15.30

Nanoparticle forms of prussian blue as a perspective tool for decorporation of radioactive cesium

Mgr. Lenka Andrejsová, Ph.D., University of Defence, Hradec Kralove

15.35 – 16.00 Coffee break

16.00 – 16.45 Decontamination

16.00 – 16.15

Caviplasma technology for the prevention and decontamination of cyanobacteria in real-world natural conditions

prof. Ing. Blahoslav Maršálek, Institute of Botany of CAS, Pruhonice

16.15 – 16.30

Nanosorbents for the decontamination of radioactive liquid waste

Mgr. Michaela Kozlovská, National Institute for NBC Protection, Kamenna

16.30 – 16.45

Biodecon, a new deep eutectic solvent and oxidizer to decontaminate chemical and biological warfare agents

Assoc. Prof. Paula Vanninen, Association for Rescue, Protection, Security and Safety, Finland

16.45 – 17.00 Coffee break

- 17.00 – 18.00 Protection against hazardous substances**
- 17.00 – 17.15 **Enhancing the resistance of firefighters' protective clothing against the penetration of combustion products**
Ing. Lukáš Králík, National Institute for NBC Protection, Brno
- 17.15 – 17.30 **Heat resistance of barrier textile materials against thickened flammable substances**
Ing. Pavel Častulík, CSc., Dekonta a. s., Prague
- 17.30 – 17.45 **Assessment of the effect of clothing properties on human thermal stress as a function of climate and work intensity**
Ing. Jan Pokorný, Ph.D., Brno University of Technology
- 17.45 – 18.00 **Innovative approaches to preventing health incidents during CBRN events: monitoring, technical and user aspects**
Ing. Lýdie Leová, Ph.D., Czech Technical University in Prague
- 18.00 – 19.00 Break and transfer to Hotel u Milina**
- 19.00 – 22.00 Conference evening in Hotel u Milina**

17. 9. 2026

- 8.30 – 10.00 Detection and identification 1**
- 8.30 – 8.45 **Field sampling and analysis**
Ing. Václav Helán, 2 THETA ASE s. r. o.
- 8.45 – 9.00 **Use of a conductivity sensor to detect low concentrations of gaseous hydrogen peroxide**
RNDr. Vladimír Obšel, CSc., DEZA – Pollution detection and capture, Brno
- 9.00 – 9.15 **WATCHGAS SST – Innovative line of gas detectors**
Ing. Dominik Harčár, Chromservis s. r. o.
- 9.15 – 9.30 **Monitoring ethylene oxide concentrations in sterilization rooms using gas chromatography**
Ing. Petr Krejča, Chromservis s. r. o.
- 9.30 – 9.45 **New technology for on-line monitoring of hazardous compounds in the air based on multidimensional mass spectrometry**
doc. Ing. Tomáš Černohorský, CSc., RMI, s. r. o., Lázně Bohdaneč
- 9.45 – 10.00 **Detection and identification of hazardous substances using molecular spectroscopy**
RNDr. František Kesner, Nicolet CZ s. r. o.
- 10.10 – 10.30 Coffee break**

10.30 – 11.00 Real events associated with the presence of hazardous substances posing a CBRN risk

10.30 – 10.45 **Cargo accident in Hustopeče**

Ing. Petr Mothejl, Dekonta a. s., Prague

10.45 – 11.00 **Nitazenes – experiences from real incident and analytic evaluation**

Ing. Adam Bosák/Ing. Lukáš Hruška, National Institute for NBC Protection/FRS of Central Bohemia Region

11.00 – 12.00 Detection and identification 2

11.00 – 11.15 **Detection and identification of hazardous substances posing CBRN risks**

Ing. Pavel Ševčík, BAS Rudice, s. r. o.

11.15 – 11.30 **Analysis of methods for identifying fentanyl using UV light**

Ing. Romana Jelínková, Ph.D., University of Defence, Vyskov

11.30 – 11.45 **Bienzomatic system for the determination of nerve agents**

Mgr. Jiří Žeravík, Ph.D., Ing. Monika Hoskocová, Ph.D., University of Defence, Vyskov

11.45 – 12.00 **Reactivation patterns of nerve-paralyzing agents: comprehensive visualization of the color change kinetics of the Detehit biosensor**

Ing. Bc. Dušan Trefilík, Ph.D., University of Defence

12.00 – 13.30 Lunch + company exhibition

13.30 – 14.30 Detection and identification 3

The use of Raman microspectroscopy for identification of microorganisms and chemical agents

Mgr. Ota Samek, Dr., Institute of Scientific Instruments of CAS Brno

HPLC in portable formate – current state of the art and perspective applications

Ing. Jozef Šesták, Ph.D., Institute of Analytical Chemistry of CAS, Brno

What does Metrohm offer to CBRN and HAZMAT teams?

RNDr. Aleš Daňhel, Ph.D., Metrohm Czech Republic

14.30 – 14.45 Conference closing

15.00 – 17.30 Practical workshop Metrohm – part 1

17.30 – 19.00 Break and transfer to Hotel u Milina

19.00 – 22.00 Workshop evening at Hotel u Milina

18. 9. 2026

8.30 – 13.00 Practical workshop Metrohm – part 2
