



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 Mesilaakso, Association for Rescue, Protection, Security and Safety, Finland

10.30 – 10.55 **Volunteer sector as support in disturbances of society in Finland, The Security Strategy for 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 – 12.30 **Flash presentations (2-3 min) – exhibitors, posters**

Metrohm ČR, Nonwovenn, BAS Rudice s. r. o., Dekonta a. s.,
Chromservis s. r. o., INGOS s. r. o., Nicolet CZ s. r. o., Pohorelec s. r. o.,
PW Krystian s. r. o., RMI s. r. o., Starmans Electronics s. r. o.

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

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

Reducing the health risks of firefighters - means of protecting the body surface against the penetration of combustion products using nanocomposite materials „FIREPRO“

Ing. Jiří Chrástek, Dekonta a. s., Stehelčevy

12.30 – 13.30 Lunch

13.30 – 14.00 Company exhibitions + Poster session

14.00 – 14.30 Prevention – training and education

14.00 – 14.15 **Global education and training in chemical safety**

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 – 15.25 Effect of hazardous substances on organism

14.30 – 14.45 **DNA damage by different types of ionizing radiation**

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

14.45 – 15.00 **A set of methods for biological and physical retrospective dosimetry in radiation emergencies**

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

15.00 – 15.15 **Nanoparticle forms of prussian blue as a perspective tool for decorporation of radioactive cesium**

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

Discussion

15.25 – 15.40 Coffee break

15.40 – 16.30 Decontamination

15.40 – 15.55 **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

15.55 – 16.10 **Application of Caviplasma technology for in-situ control of cyanobacterias and cyanotoxins in a fire water reservoir**

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

16.10 – 16.25 **Nanosorbents for the decontamination of radioactive liquid waste**
 Mgr. Michaela Kozlovská, National Institute for NBC Protection, Kamenna
 Discussion

16.30 – 16.50 Coffee break

16.50 – 18.00 Protection against hazardous substances

16.50 – 17.05 **Enhancing the resistance of protective clothing and hoods for firefighters against the penetration of combustion products**

Ing. Lukáš Králík, National Institute for NBC Protection, Brno

17.05 – 17.20 **Heat resistance of barrier textile materials against thickened flammable substances**

Ing. Pavel Častulík, CSc., Dekonta a. s., Prague

17.20 – 17.35 **Sensitivity map of clothing property effects on human heat strain under different climatic conditions and workloads**

Ing. Jan Pokorný, Ph.D., Brno University of Technology

17.35 – 17.50 **Innovative approaches to preventing health incidents during CBRN events: monitoring, technical and user aspects**

Ing. Lýdie Leová, Ph.D., Czech Technical University in Prague

Discussion

18.00 – 19.00 Break and transfer to Hotel u Milina

19.00 – 22.00 Conference evening in Hotel u Milina

17th September 2026

8.30 – 9.35 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.

Discussion

9.35 – 9.50 Coffee break

9.50 – 10.05 **Detection and identification of hazardous substances posing CBRN risks**

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

10.05 – 10.20 **Limits and trends in infrared and Raman spektroskopy for HAZMAT applications**

RNDr. František Kesner, Nicolet CZ s. r. o.

10.20 – 11.00 Real events associated with the presence of hazardous substances posing a CBRN risk

10.20 – 10.35 **Tank train accident in Hustopeče nad Bečvou: the world's largest accident involving benzene spill**

Ing. Petr Mothejl, Dekonta a. s.

Discussion

10.45– 11.00 Coffee break**11.00 – 12.10 Detection and identification 2**

10.30 – 10.45 **New technology for on-line monitoring of hazardous compounds in the air based on multidimensional mass spectrometry**

doc. Ing. Tomáš Černožský, CSc., RMI, s. r. o., Lázně Bohdaneč

10.45 – 11.00 **Bienzymatic system for the determination of nerve agents**

Mgr. Jiří Žeravík, Ph.D., Ing. Monika Hoskovcová, 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

11.45 – 12.00 **Metrohm handheld Raman solutions for CBRN Operations in Poland**

Kamila Pruzskovska, Ph.D., Metrohm Polska Sp. Z o.o.

Discussion

12.10 – 13.40 Lunch + Company exhibition**13.40 – 14.30 Detection and identification 3**

13.40 – 13.55 **DETECENT project – development of advanced techniques for detection and identification of B-agents and hazardous chemical agents**

Mgr. Jakub Vaněk, Ph.D., SÚJCHBO, v. v. i., Brno

13.55 – 14.10 **The use of Raman microspectroscopy for identification of microorganisms and chemical agents**

	Mgr. Ota Samek, Dr., Institute of Scientific Instruments of CAS Brno
14.10 – 14.25	HPLC in portable formate – current state of the art and perspective applications
	Ing. Jozef Šesták, Ph.D., Institute of Analytical Chemistry of CAS,Brno
	Discussion
14.30 – 15.00	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

18th September 2026

8.30 – 13.00	Practical workshop Metrohm – part 2
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