**High Resolution Mass Spectrometer**

**Equipment:** High Resolution Mass Spectrometer Bruker Compact

**No. of Equipment:** UJEP35

**Responsible coordinator:** Doc. Dr. Ing. Pavel Kuráň

**Name of Institution:** University of Jan Evangelista Purkyně, Faculty of the Environment

**Address of Institution:** Pasteurova 3544/1, Ústí nad Labem, 40096

**E-mail:** p.kuran@gmx.de

**Telephone:** (+420) 607964365

**Homepage:**  www.fzp.ujep.cz

**Contact person:** Ing. Dominik Pilnaj

**E-mail:** dominik.pilnaj@ujep.cz

**Telephone:**  +420 602 859 396

**Equipment Description**

High Resolution Mass Spectrometer Bruker Compact

Technical parameters:

qTOF system enables up to MS3.

Resolution cca 20000.

Mass accuracy cca2-3 ppm.

Sample inlet and available ionization techniques – GC (S/SL, various column phases, APCI), HPLC (various stationary phases, APCI or ESI), Direct insertion probe (APCI).

**Specification of expertise relevant to NanoEnviCzworkpackages:**

**WP3** a,h, **WP4** a-c, **WP5** a-c, **WP6** a, b, d, **WP7** a-e, h, **WP9** a, b

**Detailed description of expertise**

**Please, specify the main research topics connected with equipment**:

GC/LC-HRMS Bruker Compact enables qualitative and qualitative analyses for wide range of compounds due to the variable sample input and separation and ionization techniques. It is applicable for determination polar or nonpolar compounds like degradation or synthesis products, extracts of environmental samples, etc. with sufficient volatility or solubility.

**Please, specify the secondary research topics connected with equipment**:

Analyses of technological flows, pyrolysis oils, degradation or sorption kinetics and capacity, etc.

**Keywords describing research area:**

GC, LC, the Environment, HRMS-qTOF

 **Competence**

**Relevance for applied and industrial research:**

Experiences with analysis of chlorinated alkanes and alkenes, esters of phospholipids and chelating agents, degradation products of pesticides etc.

**Relevance for fundamental studies:**

Characterization of sorption kinetics or capacity, identification of synthesis products, …