**Respirometer**

**O2/CO2 /CH4 sensors**

**Equipment:** Respirometer

**No. of Equipment: TUL9**

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**Equipment Description**

**Description of equipment:**

Continuous automatic Micro-Oxymax Respirometer with O2 sensor, CO2 sensor and CH4 sensor. Respirometer has ten positions for samples and thermal bath.

**Specification of expertise relevant to NanoEnviCz workpackages:**

**WP6**d, **WP7**g,h, **WP9**b,c,e,f,

**Detailed description of expertise**

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

Respirometer (O2/CO2/CH4 sensors) is able to measure oxygen consumption, carbon dioxide production and methane production in various matrices. Respirometer is designed for monitoring the biodegradation of organic substances in water (soil, gas) environment. It can be used for measurement in aerobic and anaerobic conditions.

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

Toxicity, biostability and biodegradability of various substances could be measure with respirometer. Similarly, microbial metabolism of various substrates could be monitored.

**Keywords describing research area:**

respiration, bacteria, biodegradation, biostability, toxicity, substrate, microbial metabolism

**Competence**

**Relevance for applied and industrial research:**

Toxicity of nanomaterials and biodegradation of various substances could be monitored in environmental matrices (water, soil, activated sludge).

**Relevance for fundamental studies:**

Toxicity of nanomaterials and biodegradation of various substances could be monitored in environmental matrices (water, soil, activated sludge).