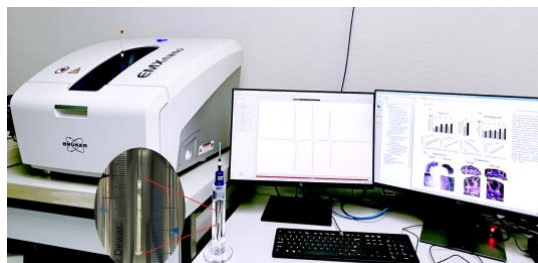


## Technical Information



### Bench-Top EPR EMXnano Bruker

Bruker

**Location address:**

EPFL AVP CP CIBM AIT CH F1-616

**Contact Person:** Dr Katarzyna Plerzchala

(katarzyna.pierzchala@epfl.ch)

### Description

EMXnano™ is the high-performance benchtop electron paramagnetic resonance (EPR) instrument which allow for a real time direct detection of oxidative stress in combination with nontoxic cell permeable spin probes. EPR have been recognized as one of the most powerful and exclusive technique that allow direct and reliable detection of the reactive oxygen species ROS.

### Specifications

EMXnano Key specifications:

- **Operating frequency:** X-Band
- **Microwave power:** 100 mW
- **Concentration sensitivity:** 50 pM
- **Field sweep range:** 7000 G
- **Field homogeneity:** 50 mG over sample volume
- **Field stability:** 10 mG/h
- **Sweep resolution (field and time):** 250.000 points
- **Reference standard:** Integrated and motorized
- **SpinCount:** Concentration determination
- **SpinFit:** Spectrum simulation and fitting

Accessories:

- **Liquid N2 variable temperature unit:** 100 –475 K
- **Liquid N2 finger Dewar:** 77 K
- UV irradiation system
- Flat/Tissue/Flow-through cells

## **Additional related infrastructure**

- Animal preparation and surgery room, proximity of CIBM MRI EPFL animal facility
- Neurochemistry laboratory

## **Software:**

Bruker Xenon Software:

- Integrated acquisition and processing software
- EPR Quantification Package with spin-trap library