

**European Network on New Sensing Technologies for Air Pollution
Control and Environmental Sustainability - *EuNetAir*
COST Action TD1105**

**1st EuNetAir Air Quality Joint-Exercise Intercomparison
*Sensors versus Analyzers for Air-Pollution Monitoring in Aveiro City***

**Institute for Environment and Development - IDAD
Aveiro, Portugal, 13 - 27 October 2014**

Action Start date: 01/07/2012 - Action End date: 30/06/2016 - Year 3: 2014-15 (*Ongoing Action*)

Air Quality Mobile Laboratory of IDAD



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Local Organizing Committee Member

**IDAD - Institute of Environment and Development /
Portugal**

Air Quality Mobile Laboratory of IDAD



Data measured

T, RH, WD,
WV, Rad, PP

PM10

PM2.5

CO

O₃

NO_x

SO₂

BTEX

Reference methods

(Air Quality Directive (AQD) - Directive 2008/50/EC)

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PM10, PM2.5,
NO_x, SO₂, CO,
O₃, BTEX

NO_x, SO₂,
CO, O₃

PM10	Environnement MP101M	ISO 10473: Measurement of the mass of particulate matter on a filter medium – Beta-ray absorption method (equivalent method)
PM2.5	Verewa F701	
Carbon Monoxide	Environnement CO11M	EN 14626: Standard method for the measurement of the concentration of carbon monoxide by nondispersive infrared spectroscopy
NO _x	Environnement AC31M	EN 14611: Standard method for the measurement of concentration of nitrogen dioxide and nitrogen monoxide by chemiluminescence
Benzene	Environnement VOC71M	EN 14662: Standard method for measurement of benzene concentrations (gas chromatography)
Ozone	Environnement O341M	EN14625: Standard method for the measurement of the concentration of ozone by ultraviolet photometry
SO ₂	Environnement AF21M	EN 14212: Standard method for the measurement of concentration of sulphur dioxide by ultraviolet fluorescence

Final comments



- 15 min / 1 hour average
- Time settings – UTC
- Measurement ranges:
 - PM (0-200 $\mu\text{g}/\text{m}^3$)
 - CO (0-100 mg/m^3 ; 86 ppm)
 - SO₂ (0-1000 $\mu\text{g}/\text{m}^3$; 376 ppb)
 - NO (0-1200 $\mu\text{g}/\text{m}^3$; 962 ppb)
 - NO₂ (0-500 $\mu\text{g}/\text{m}^3$; 261 ppb)
 - O₃ (0-500 $\mu\text{g}/\text{m}^3$; 250 ppb)
 - Benzene (0-50 $\mu\text{g}/\text{m}^3$; 15 ppb)

Indicative concentrations
(08-10/October)

PM < 50 $\mu\text{g}/\text{m}^3$

CO < 2 ppm

SO₂ < 2 ppb

NOx < 200 ppb

O₃ < 50 ppb

C₆H₆ < 0,5 ppb



Next steps

- Installation of Sensors
- Installation of computers, other material
(Mobile Lab with WI-FI. Password: **idadSensor**)