MINI PARTICLE SAMPLER
MPS

The Mini Particle Sampler MPS has been developed by **INERIS** in order to propose a portable, low cost and simple device for **particles collection and analysis**. Particles and especially nano-particles monitoring becomes a real stake in a lot of industrial processes but also in air quality measurement.

A new approach consists in using a TEM (Transmission Electron Microscopy) grid as a filter to collect particles. This new mini portable sampler allows to collect particles on a TEM grid with **high collection efficiency** for their characterization. MPS objective is not to collect a big amount of particles for mass measurement but just enough for TEM analysis. This product is manufactured and sold worldwide by ECOMESURE under INERIS licence.

In order to do sampling on site, ECOMESURE offers a suitcase that can contain up to 10 MPS that can be prefilled. The suitcase also include a portable pump, all related accessories, the user manual and have free spaces for tools and documents.

APPLICATIONS

- **Indoor and outdoor air quality**
- **Nanoparticles characterization**
- **Fiber sampling**
- **Particles sampling in combustion and industrial emission**

BENEFITS

- Simple - Portable – Easy handling
- Simple particle characterization
- High efficiency particles collection rate
- Range of particle : 0.001 µm to 1 µm
- Adjustable flow rate between 0.3 and 1.5 l/min with portable pump
- Suitcase with up to 10 MPS and related accessories

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SPECIFICATIONS

MPS

PARTICULES SIZE RANGE	1 nm to 1 µm
DIMENSION	11 cm
OUTPUT DIAMETER	6 mm
SUCTION FLOW	From 0.3 to 1.5 lpm
SAMPLING GRID	Grid for transmission electron miscroscop (diameter: 3mm)

MPS SUITCASE

SUITCASE	Plastic Dimension: 45x36 cm Weight: 2,4 kg
MPS	Up to 10 MPS
PUMP	Portable and easy to use From 0.3 to 1.5 l/min
PUMP CHARGER	Battery life: 8h
TUBING	Connector included, 1m long
GRIDS	20 Quantifoil grids for TEM in their box
SEALS	20 seals
PINCER	For MPS grid

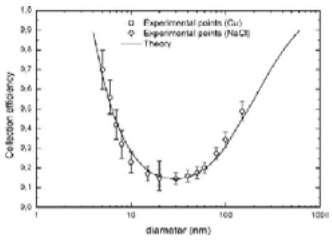

Fig 1 : Particle collection efficiency

Fig 2 : MPS

Fig 3 : MPS suitcase

B. R'mili , Olivier L. C. Le Bihan , C. Dutouquet , O. Aguerre-Charriol & E. Frejafon (2013): Particle Sampling by TEM Grid Filtration, Aerosol Science and Technology, 47:7, 767-775

SERVICE

You can send your grids to ECOMESURE and receive an analysis report validated by INERIS.

REFERENCE

The MPS is recommended by the Guide to measuring airborne carbon nanotubes in workplaces of the AIST, the reference Japanese institute.

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