Mechanics, energy

TRANSPORT AND ANALYSIS SYSTEM FOR HAZARDOUS SAMPLES

Innovative technology for the containment and analysis of potentially hazardous samples, with no risk of contamination

Technological advantages

A reliable and effective system

Direct and safe sample analysis
Robust product
Periodic leak-tightness checks
Optimised for non-destructive analysis

A miniature P4 laboratory

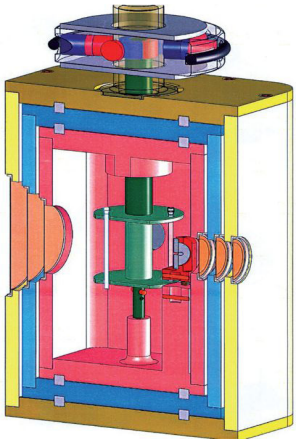
Miniaturised system
Easy to transport
Can be reused and sterilised

Technical characteristics

Diameter of capillary tubes: between 0.1 and 5 mm
Overall weight: 2.3kg
Chamber dimensions (Length x Depth x Height)
- Chamber 1: 41x32x62 mm
- Chamber 2: 51x42x80.4 mm
- Chamber 3: 69x60x116.8 mm

Differential pressure levels:
- Chamber 1: 500 mbar
- Chamber 2: 750 mbar
- Chamber 3: 900 mbar

3D image of sample carrier



Sectional view of system, composed of three leak-tight chambers

Overview of invention

Device for the transport and analysis of potentially hazardous samples

Structure comprises three capillary tubes contained in three nested, sealed chambers that enable external hyperspectral analysis (X-ray, Raman, and infrared)

Potential applications

Space missions in which samples are returned for analysis

Pharmaceutical laboratories (biological, chemical analyses, etc.)

Measuring of toxic/radioactive samples

Commercial benefits

Unique product

Innovative technology
Tested and validated prototype
Miniaturised, compact system for easy transport
Time saved thanks to wide range of possible analyses
Lower installation costs

TRL : 5 (2010)

Patented invention, available under license

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For more information

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