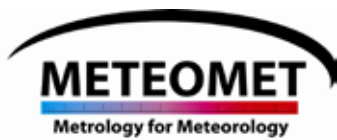


CETIAT is involved in several European Metrology Research Programs:

Project ENV07  
Metrology for pressure,  
temperature, humidity  
and airspeed  
in the atmosphere  
[www.meteomet.org](http://www.meteomet.org)



## Project ENV07

Improving climate models by  
improving measurements

### *Improving measurements of pressure, temperature, humidity and airspeed*

Measurements of pressure, temperature, humidity and airspeed are key to understanding the climate of the Earth. This project aims to improve climate models by improving these measurements. For example, humidity, i.e. water vapour, has a high heat capacity and can absorb and transfer energy in the atmosphere. Humidity measurements are required up to the stratosphere, however levels of water vapour in the stratosphere are so low that traditional techniques lack sufficient accuracy. By improving such measurements this project will contribute to metrological and meteorological research and a better interpretation of climate data.

**The project has started in 2011 and will last until 2014.**

Project HLT07  
Metrology for drug delivery  
[www.drugmetrology.com](http://www.drugmetrology.com)  
[www.euramet.org](http://www.euramet.org)



## Project HLT07

Measuring drug flow rate

### *Improving the safety and efficiency of drug delivery*

One of the most important aspects of drug delivery is the amount of drug delivered, but knowing the flow rate – how fast a quantity of drug is delivered – is also vital for safe and efficient health care treatment.

Currently, drug delivery at low flow rates cannot be set with sufficient accuracy as the measurements required have either not been validated or do not exist. In addition, accuracy is further reduced if multipump infusion is involved; where more than one pump delivers a drug.

This project will develop measurement services for low flow rates, e.g. between 1 nanolitre per minute and 100 millilitres per minute, and assess the performance of commercial flow meters and drug delivery devices. It will also make drug delivery more reliable by improving calibration services for drug delivery devices and by producing best practice guides.

**The project has started in 2012 and will last until 2015.**

The joint research project SIB64 - Metrology for Moisture in Materials, known as METefnet, which brings together the main European national metrology research institutions active in the field of moisture measurements in collaboration with metrology institutes worldwide, accredited testing and calibration laboratories, suppliers of moisture instrumentation and drying equipment, commercial research organisations, university research departments, and companies manufacturing moisture-critical products.



## About Metefnet

The project is funded by European Metrology Research Programme (EMRP), implemented by European Association of National Metrology Institutes (EURAMET).

The joint research project SIB64 Metefnet aims to develop unambiguous principles, methods and equipment for establishing and disseminating SI traceability to measurements of moisture in solids by:

- developing unambiguous realisation methods for water mass fraction and new primary standards based on these methods
- improving the coulometric Karl Fischer titration based realisation for water amount fraction
- creating effective general principles of SI traceability in the field of moisture measurements
- developing new/adapted CRMs and novel transfer standard instruments to enable dissemination of SI traceability with optimal accuracy
- developing methods for quantifying and reducing the effect of moisture change during transporting and handling samples
- developing a novel calibration facility with SI traceability for surface moisture meters
- developing modelling to include local moisture variations in the uncertainty estimations, and developing uncertainty analysis tools for selected industrial applications and establishing a coherent and developed moisture metrology infrastructure in Europe.

**The JRP has started in June 2013 and will last until May 2016.**



CENTRE TECHNIQUE DES INDUSTRIES AÉRAULIQUES ET THERMIQUES