

Metrology for Humidity at High Temperatures and Transient Conditions

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Introduction

Industry needs:

- improved reliability in humidity measurements at temperatures above 100 °C and in transient conditions
- more efficient maintenance of humidity instruments
- in-line water activity measurement method to improve humidity control.

Industry will get:

- new and improved products
- improved energy efficiency
- reduction in CO₂ emissions and waste
- increased economic turn-over through improved humidity control.

Improved methods for:

- Drying
- Baking
- Testing
- Storage
- Maintenance

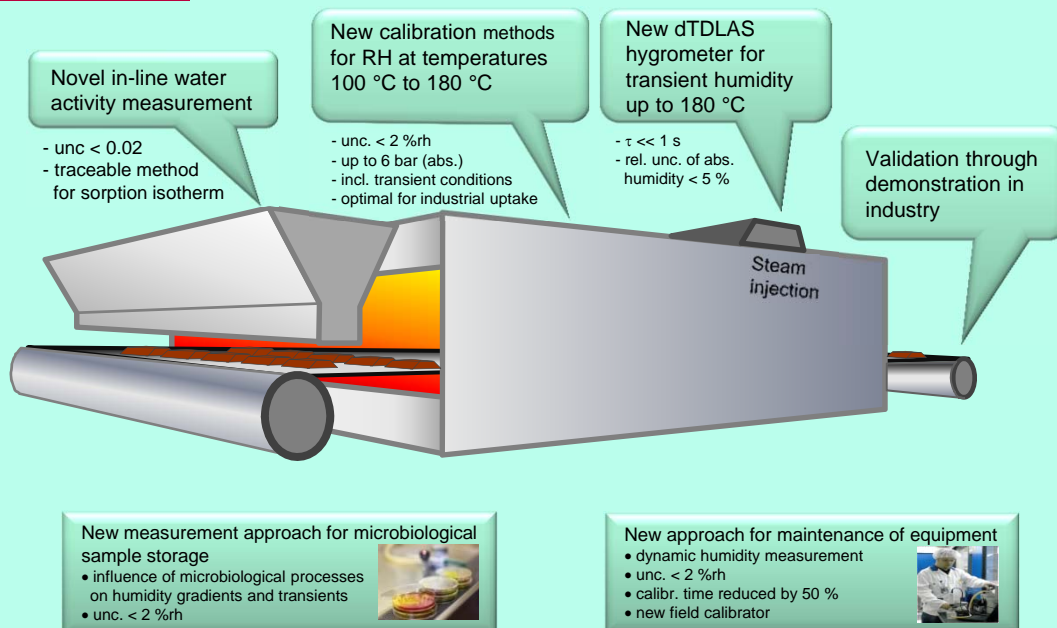
Every 0.1 % improvement in drying efficiency due to better process control could save around 30 M€/year in Europe.



Food processing Pharmaceutical Paper production Instrum. manufact. Environmental testing

This poster outlines the EMPIR project 14IND11 HIT that aims at metrological developments needed by industry for humidity measurements at temperatures above 100 °C and in transient conditions. This 3-year project started in September 2015.

Objectives of the research



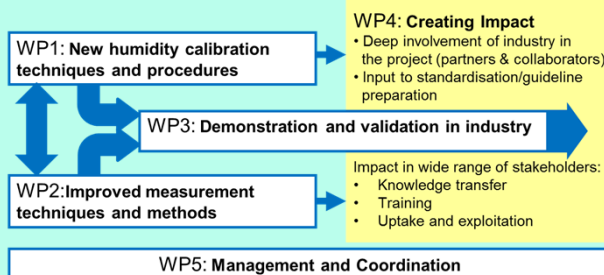
Implementation

Consortium

- 8 NMI/DI
- 4 industrial companies
- 3 research institutes
- Coordinator: VTT-MIKES

Resources:

- EU contribution: 1.46 M€
- 188.9 person-months



Conclusion

A new EMPIR project HIT will develop improved measurement and calibration techniques for enabling and/or strengthening SI traceability in industrial humidity measurements at high temperatures up to 180 °C and transient conditions. Demonstrations in industrial applications will show the applicability of the developments.