IMPRESS 2

Impress 2, Metrology for air pollutant emissions Stakeholders meeting, 11/01/2021

WP 2 Biomass Emissions, Introduction

Isaline Fraboulet

EMPIR EURAMET

The EMPIR initiative is co-funded by the European Union's Horizon 2020 research and innovation programme and the EMPIR Participating States

INERIS

maîtriser le risque pour un développement durable

WP 2 Context

- Impact on air quality of the solid biomass heating generators used in the domestic sector all over Europe, mainly due to condensable fraction of PM and organics cimpounds : **no SRM for the determination of the emissions of these parameters**

- Biomass combustion considered as renewable and neutral in terms of CO_2 emissions: **no on-line measurement techniques to apportion CO_2 emissions as renewable and fossil fuel derived**

- Novel **hyperspectral methods** with **capability to monitor multispecies emissions from both biomass and other combustion** sources **exist and need to be evaluated**

WP 2 Overview

Global objective:
evaluate and validate measurement methods for the characterisation of emissions from wood and non-wood biomass combustion for a wide range of pollutants, including PM, OGC, SVOCs; PAHs as well as CO2 emissions.

3 Tasks:

2.1: **Measurement methods for the characterization of PM and organic compounds emissions from domestic biomass combustion (INERIS, RISE, ENEA , ISSI, DTI)**

2.2: **Development of validated methods to distinguish the isotopic composition of CO2 emissions from biomass burning using online spectroscopic techniques (VTT).**

2.3: **Validation of novel hyperspectral techniques for simultaneous multispecies detection (VSL, UC3M, CEM)**

WP 2 today's presentations

- Conception and evaluation of performance of a dilution chamber to collect solid and condensable fractions of PM emitted by wood logs and pellets stoves, Francesca Hugony, ENEA - Italy (Task 2.1)

- Optical spectrometer for real-time and on-site measurements of stable isotopes of combustion originated carbon dioxide, Ville Ulvila, VTT-Finland (Task 2.2)

- Hyperspectral techniques for air pollutant detection and quantification, Guillermo Guarnizo, UC3M-Spain (Task 2.3)