

# **WLTP-DTP Subgroup Additional Pollutants**

## **Progress report**

Date: 06. Jun. 2012

WLTP-DTP Subgroup Additional Pollutants  
Progress Report June 2012

## Meeting schedule

#	Date	Location	Participants	Main Topic
1	20.07.2010	Web/TelCo	14	Definitions
2	27.09.2010	Web/TelCo	20	List of pollutants
3	9./10.12.2010	JRC/Ispra	15	List of Candidate methods
4	7./8.03.2011	BMW/Munich	21	Drafting of GTR
5	10/11.05.2011	JRC/Ispra	16	Drafting of GTR
6	09.12.2011	Web/TelCo	16	VP2 parameter list
<b>7</b>	<b>11.05.2012</b>	<b>Web/TelCo</b>	<b>16</b>	<b>Open issues GTR</b>
<b>8</b>	<b>25.05.2012</b>	<b>Web/TelCo</b>	<b>15</b>	<b>Open issues GTR</b>
<b>9</b>	<b>19.06.2012</b>	<b>Horiba/Frankfurt</b>		<b>Validation of AP</b>
<b>10</b>	<b>Tbd.</b>	<b>Tbd.</b>		

**Validation phase 2:**

**NO/NO<sub>x</sub>-measurement:** all labs should provide feed back

**N<sub>2</sub>O:** only some labs will provide data

**NH<sub>3</sub>** only for Diesel with SCR: a few labs will be able to deliver data

**EtOH** and **Aldehydes:** later... (specific VF for those compounds?)

## Validation phase 2: NO/NOx-measurement

All participating labs measure both ways (bag and dilute modal).

All measurements:

- Absolute difference between dilute and modal measurement

Repeat tests:

- Variability of NO result compared to NOx-measurement
- Variability of NO result from bag measurement versus dilute modal

**→ All participating labs in VP2 should deliver results**

## Validation phase 2: N<sub>2</sub>O-measurement

**Use of two (or more) different systems in parallel (e.g. QCL\*, GC-ECD, FTIR,...)**

Calibration Gas: 5 ppm of N<sub>2</sub>O in N<sub>2</sub> (+/- 2%)

All measurements:

- repeatability of air bag measurement
- difference in result of the two systems
- stability of calibration (apply calibration gas before and after test)

Repeat tests:

- Variability of N<sub>2</sub>O result

**→ Some labs will deliver results**

\* Quantun cascade Laser detecto

## Validation phase 2:

### **NH<sub>3</sub> only for Diesel with SCR**

Take care of extracted sample

Measurement of two systems in parallel (e.g. QCL and FTIR...)

Use of different sampling systems

- one with smallest possible Volume, shortest possible line length

- one with larger Volume and line length

- where available, use in situ system in parallel

All measurements:

- compare average concentration result

- compare traces of the systems (incidence of first peak, rise time, drag)

Repeat tests:

- Variability of NH<sub>3</sub> result

**→ Only few labs will deliver results**

## Validation of AP

OK!

**NO/NO<sub>x</sub> → sufficient results expected from VP2**

N<sub>2</sub>O → due to limited results from VP2 additional validation might be necessary

NH<sub>3</sub> → additional validation necessary

EtOH → additional validation necessary

Aldehydes → additional validation necessary

## Validation of EtOH measurement

### Proposed setup:

Test in one lab (tbd.)

Flex fuel vehicles running on E05, E25 and E75

Request to suppliers to make available online systems for EtOH

All systems measure in parallel along with existing impinger method

*Test should be carried out together with validation of aldehydes (on-line systems for Aldehydes are under development but not yet available) for efficiency reasons*



## Validation of Aldehydes

### Proposed setup:

Online systems for Aldehydes are under development but not yet available

As soon as systems become available:

Test in one lab (tbd.)

Request to suppliers to make available online systems for aldehydes

All systems measure, in parallel, along with existing DNPH-method

## Further definition of an additional validation program

**Possibilities** and necessary **setup** for additional Validation test will be discussed in detail during next face to face meeting in Frankfurt (hosted by Horiba)

**Date 19.06.2012** 10:00 – 16:00

*CIRCA documents WLTP-DTP-AP*

Draft GTR proposal: ***Main contribution to Annex 5***

*THANKS FOR YOUR ATTENCION*  
*C. Astorga*