

WLTP-DTP Subgroup Additional Pollutants

Progress report

Date: 18. Jan. 2012

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Meeting schedule

First Meeting:	Telephone/Web Conference	20th July 2010	16 participants
2nd Meeting:	Telephone/Web Conference	20th July 2010	20 participants
3rd Meeting:	Face to face meeting at JRC/Ispra	9/10 Dec. 2010	14 participants
4th Meeting:	Face to face meeting at BMW/Munich	7/8 March 2011	18 participants
5th Meeting:	Face to face meeting at JRC/Ispra	10/11 Mai 2011	16 participants
6th Meeting:	Telephone/Web Conference	09th Dec. 2012	16 participants

Qualitative assessment parameters for validation phase 2

NO-measurement

-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

Request to prepare parameter list for further additional pollutants

Issue was discussed within group. There was agreement, that only NO₂ should be required from all labs in VP2:

- most labs do not have instrumentation or instrumentation is not available for other APs
- reference fuel E5 → measurement of EtOH and Aldehydes not meaningful

Decision:

- EtOH and Aldehydes should not be measured in VP2
- Allow labs to use existing equipment without specifying parameter list:
 - NH₃ only for Diesel with SCR → take care of extracted sample!!
 - N₂O
 - Report setup/analyzers used and experiences made

NO measurement from Bag

After discussion of pros and cons it was decided to retain the possibility of bag measurement of NO for VP2.

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

Further decision will be based on results of VP2.

Parameter list has been amended (Version03)

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Parameter List (AP) Version 03

#	Item	Set Point	Variations	Remarks
1	Sampling			
1.1	sample point sampling	from diluted exhaust continuous dilute modal	bag bag	all Labs should measure continous modal and bag all Labs should measure continous modal and bag
2	Analysis			
2.1	Analyzer	CLD in NO-mode	UV-RAS, QLC in NO- mode UV-RAS, QLC in NO2- mode	UV-RAS and QLC allow direct measurement of NO2
3	Calculation			
3.1	density of NO	2.050 g/m ³ @ 273.2 K and 101.33 kPa		
3.2	density of NO2	2.050 g/m ³ @ 273.2 K and 101.33 kPa		
3.3	density of NOx	2.050 g/m ³ @ 273.2 K and 101.33 kPa		
4	Calibration			
4.1	Calgas	NO in N2	NO2 in N2, if direct measurement of NO2	

Open Issues

Allow bag measurement for NO₂?

To be addressed in validation phase 2

NH₃ sampling during engine off

Temperature for NH₃ sampling (110 – 190?° C)

proposal: → setpoint between 110 ° C and 190 ° C with range of +/- 10 K
→ JAMA position: between 110 and 133 due to decomposition of urea

Open Issues

Traceability to national standards of cal gas for AP

→ DTP → gas industry → difficulties for NH₃, ETOH to be expected,
achievable accuracy/stability has to be established