



# Air & Stack Emissions (AIR) AR0816 - SGS Galson Individual Report

## Round: 27

Issue Number 1

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Science  
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LGC is the accredited provider of the PT scheme.



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## **Sample Details**

Samples were despatched on 16 July 2018  
The reporting deadline was 10 August 2018

The following samples were distributed in AIR Round 27:

**Sample 11:** 4 x Palmes-type diffusion tubes spiked with sodium nitrite as a surrogate for Nitrogen dioxide (NO<sub>2</sub>)

**Sample 12:** 4 x Tenax TA filled sorbent tubes (Perkin Elmer type - 6.4mm OD, 5 mm ID and 90 mm long) dynamically loaded from the gas phase (prepared in accordance with procedures set out in ISO 6145 part 4) for analysis by thermal desorption plus 2 x blank sorbent tubes

**Sample 12A:** 4 x Carbopack X filled sorbent tubes (Perkin Elmer type - 6.4mm OD, 5mm ID and 90mm long) dynamically loaded from the gas phase (prepared in accordance with procedures set out in ISO 6145 part 4) for analysis by thermal desorption plus 2 x blank sorbent tubes

**Sample 14:** 4 x 47 mm diameter quartz fibre filters spiked with anion solutions plus 2 x blank filters

This scheme is managed and operated by LGC Standards Proficiency Testing and is supported through technical advice from HSL. The production of the materials provided for Samples 11, 12, 12A, and 14 in this round was undertaken by HSL.

Further information regarding assigned values, performance assessment and technical comments can be found under the individual sample and analyte results.

Please note: Not all the test materials / analytes in this proficiency testing scheme are included in our UKAS scope of accreditation. Please see the current Scheme Description for details of non-accredited items.

## Individual Report

This individual report contains a summary of all the results submitted and the performance assessments for your laboratory and your individual analysts. Please note that nominated laboratory results are represented by a blue highlight in the analyst box.

Data statistics given in the individual report are for the method you have used for each analyte. Further detail can be obtained from the main report.

Full details of the scheme, sample types, analytes and data analysis can be found in the corresponding Main Report, along with any technical comments, if applicable. The Main Report is the definitive version.

If you have any questions regarding your results which are not answered in the Main Report, please contact us using the details on the front of the report. If you would like to order any samples for re-test, please contact our customer service department or your local office.

## Results Summary

Sample	Results Reported	Satisfactory Results	Questionable Results	Unsatisfactory Results	Not Assessed <sup>^</sup>
12-A - VOCs - Carbopack X sorbent tubes*	16	0	0	0	16
<b>Round Total</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>

\* Analyte(s) in this round have colour coding suspended. Refer to the main report(s) for further details.

You can identify which analyte(s) apply to you on the following pages (performance scores that have no colour coding identify where suspensions have occurred.)

<sup>^</sup> Results which are Not Assessed should be reviewed by comparing them with the assigned value and other relevant statistics given in the main report. Participants, according to their internal quality criteria, may consider Not Assessed results to be satisfactory, questionable or unsatisfactory. Further information regarding why results may not be assessed is given in the Scheme Information section of the main report.

**Please note surplus PT samples are available as QC materials once the round has closed. These samples can be purchased at a reduced rate if you have taken this sample during the main round.**

No unsatisfactory results in this round

No questionable results in this round

## 12-A - VOCs - Carbo-pack X sorbent tubes#

Analyte	Analyst	Method	Result	Ux	Units	z score (** z' score)	Assigned Value	Ux AV	SDPA	Exp.SDPA	No of results	Median	Mean	Robust SD	SD
12A-A - Benzene#	Lab Result	GC-MS	100.4		ng	0.03	100.2	1.7	7.52	N/A	5	100.0	100.1	1.48	2.69
12A-B - Benzene#	Lab Result	GC-MS	89.9		ng	0.53 **	86.3	2.2	6.47	6.83	5	85.6	85.7	2.37	3.06
12A-C - Benzene#	Lab Result	GC-MS	52.8		ng	-0.08	53.1	1.1	3.98	N/A	5	52.8	52.1	1.78	2.05
12A-D - Benzene#	Lab Result	GC-MS	65.1		ng	0.53 **	62.2	2.9	4.66	5.49	5	59.2	60.8	5.34	4.51
12A-A - Toluene#	Lab Result	GC-MS	140.7		ng	0.00 **	140.7	10.4	10.55	14.81	4	139.2	136.3	16.61	21.92
12A-B - Toluene#	Lab Result	GC-MS	125.2		ng	-0.23 **	127.6	4.0	9.57	10.37	4	125.2	125.1	7.12	4.95
12A-C - Toluene#	Lab Result	GC-MS	134.2		ng	0.00 **	134.2	5.3	10.07	11.38	4	130.5	123.8	9.86	20.50
12A-D - Toluene#	Lab Result	GC-MS	155.7		ng	0.00 **	155.7	10.1	11.68	15.44	4	150.7	146.4	18.02	23.62
12A-A - Xylene (all isomers)#	Lab Result	GC-MS	135.0		ng	-1.00 **	146.6	3.6	11.00	11.57	4	142.5	142.5	11.12	10.61
12A-B - Xylene (all isomers)#	Lab Result	GC-MS	115.5		ng	-0.55 **	122.8	9.4	9.21	13.16	4	115.5	112.3	21.50	19.44
12A-C - Xylene (all isomers)#	Lab Result	GC-MS	160.5		ng	-0.58 **	170.0	10.2	12.75	16.33	4	165.3	165.3	7.04	6.72
12A-D - Xylene (all isomers)#	Lab Result	GC-MS	189.6		ng	-0.56 **	200.0	10.8	15.00	18.48	4	194.8	194.8	7.71	7.35
12A-A - Ethyl benzene#	Lab Result	GC-MS	101.1		ng	0.09 **	100.3	4.9	7.52	8.98	4	101.1	93.1	13.20	22.07
12A-B - Ethyl benzene#	Lab Result	GC-MS	85.5		ng	-0.10 **	86.2	2.5	6.46	6.93	4	85.5	85.1	8.16	6.06
12A-C - Ethyl benzene#	Lab Result	GC-MS	56.6		ng	-0.26 **	57.9	2.5	4.34	5.01	4	56.6	52.8	8.01	11.58
12A-D - Ethyl benzene#	Lab Result	GC-MS	68.5		ng	-0.31 **	70.2	1.8	5.27	5.57	4	72.3	72.3	5.56	5.30

# This is not included in our UKAS scope of accreditation

\*\* Please note, participant performance for this analyte has been assessed using a z' score, rather than a z score, in order to account for the measurement uncertainty of the assigned value which is not negligible when compared to the SDPA.