

64 Everard Drive, Springburn, Glasgow, G21 1XG

Test Report

Client Ref No: AIR TESTS

Report Date: 4 December 2019 Test Report No: 70653638

Issue No:

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Contract: NLBLOCK

Fax 0141 276 0669

North Lanarkshire Council Business Regulation Service

Fleming House Tryst Road Cumbernauld G67 1DZ

Technical Enquiries: Mass Spec Phone 0141 276 0628 @Glasgow.Gov.uk

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

24/10/2019

Sampled by:

Sample Type: Site:

ax - Volatile Organic Compounds

St Ambrose High

Sample Point:

Science 9, 2064 Sink 1 left hand side of door

Date/Time on:

24/10/2019 at 07:20 24/10/2019 at 07:53

Date/Time off: Tenax I.D.

MI016152

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details :

Determination	Result	Units	
Sample collected by	K Macvica	K Macvicar	
Sample volume	6.154	litres	
Total VOC ng	1505	ng	
Total VOC mg/m3	0.245	mg/m^3	
methanol	0.0365	mg/m^3	
Nonanal	0.0074		
Butan-1-ol	0.0142	mg/m^3	
Decamethyl cyclopentasiloxane	0.0103	mg/m^3	
Acetic acid	0.0332	mg/m^3	
2-ethyl hexanol	0.0077	mg/m^3	
Limonene	0.0040		
1,2-cylcopropylhexane	0.0080	mg/m^3	
Arcosolv	0.0016	mg/m^3	
Benzene	0.0003		

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Test Details Continued:

Determination

Result

Units

Toluene

0.0069

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported, in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.245 mg/m3. This TVOC was within the range we expect for indoor air.
- 2. The following comments are related to the total volatile organic contamination (TVOC). The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air. Odour complaints, irritation and discomfort can occur between 0.2 3.0 mg/m3.

The TVOC level detected is just above the lower end of this range and would not be expected to cause a complaint.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and painting.
- 4. Benzene level of 0.0003 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m^3. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- 10. Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv is used in adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products. 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon. The recent refurbishments that have occurred could have contributed to a number of the compounds detected.

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Test Details Continued:

Determination

Result

<u>Units</u>

Approved Signatory



Chemist



64 Everard Drive, Springburn, Glasgow, G21 1XG

Test Report

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North Lanarkshire Council **Business Regulation Service** Fleming House Tryst Road Cumbernauld

Technical Enquiries: Mass Spec Phone 0141 276 0628 @Glasgow.Gov.uk Fax 0141 276 0669

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

24/10/2019

Sampled by:

G67 1DZ

Sample Type:

wax - Volatile Organic Compounds

Site:

St Ambrose High

Sample Point:

Science 9, 2064 Sink 1 left hand side of door

Date/Time on:

24/10/2019 at 07:20

Date/Time off:

24/10/2019 at 07:53

Tenax I.D.

MI016152

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details:

Determination	Result	Units	
Sample collected by	K Macvica	K Macvicar	
Sample volume	6.154	litres	
Total VOC ng	1505	ng	
Total VOC mg/m3	0.245	mg/m^3	
methanol	0.0365	mg/m^3	
Nonanal	0.0074		
Butan-1-ol	0.0142	mg/m^3	
Decamethyl cyclopentasiloxane	0.0103	mg/m^3	
Acetic acid	0.0332	mg/m^3	
2-ethyl hexanol	0.0077	mg/m^3	
Limonene	0.0040		
1,2-cylcopropylhexane	0.0080	mg/m^3	
Arcosolv	0.0016	mg/m^3	
Benzene	0.0003	-	

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Test Details Continued:

Determination

Result

Toluene

0.0069

Units

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported, in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.245 mg/m3. This TVOC was within the range we expect for indoor air.
- 2. The following comments are related to the total volatile organic contamination (TVOC). The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air. Odour complaints, irritation and discomfort can occur between 0.2 3.0 mg/m3.

The TVOC level detected is just above the lower end of this range and would not be expected to cause a complaint.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and painting.
- 4. Benzene level of 0.0003 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m^3. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- 10. Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv is used in adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products. 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon. The recent refurbishments that have occurred could have contributed to a number of the compounds detected.

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Test Details Continued :

Determination

Result

<u>Units</u>

Approved Signatory:



Chemist



64 Everard Drive, Springburn, Glasgow, G21 1XG

Test Report

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70653640

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North Lanarkshire Council **Business Regulation Service** Fleming House

Tryst Road Cumbernauld G67 1DZ

Technical Enquiries : Mass Spec Phone 0141 276 0628

Glasgow.Gov.uk

Fax 0141 276 0669

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

24/10/2019

Sampled by:

Sample Type:

Tenax - Volatile Organic Compounds

Site:

St Ambrose High

Sample Point:

English 2 R1044

Date/Time on: Date/Time off: 24/10/2019 at 07:25 24/10/2019 at 07:57

Tenax I.D.

A89409

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere

and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details:

Determination			
Determination	<u>Result</u>	<u>Units</u>	
Sample collected by	K Macvic	K Macvicar	
Sample volume	5.967	litres	
Total VOC ng	1468	ng	
Total VOC mg/m3	0.246	mg/m^3	
methanol	0.0549	mg/m^3	
Nonanal	0.0075		
Butan-1-ol	0.0123	mg/m^3	
Decamethyl cyclopentasiloxane	0.0075	mg/m^3	
Acetic acid	0.0233	mg/m^3	
2-ethyl hexanol	0.0075	mg/m^3	
Limonene	0.0026		
1,2-cylcopropylhexane	0.0079	mg/m^3	
Arcosolv	0.0007	mg/m^3	
Benzene	0.0003		

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Test Details Continued:

Determination

Result

Units

Toluene

0.0107

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported, in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.246 mg/m3. This TVOC was within the range we expect for indoor air.
- 2. The following comments are related to the total volatile organic contamination (TVOC). The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air. Odour complaints, irritation and discomfort can occur between 0.2 3.0 mg/m3.

The TVOC level detected is just above the lower end of this range and would not be expected to cause a complaint.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and painting.
- 4. Benzene level of 0.0003 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m^3. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- 10. Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv, propylene glycol ethers are used in paints, coatings, cleaners and adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products. 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon and typical for indoor atmospheres. The recent refurbishments that have occurred could also have contributed to a number of the compounds detected.

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Determination

Result

<u>Units</u>

Approved Signatory:



Chemist



64 Everard Drive, Springburn, Glasgow, G21 1XG

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70653639

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North Lanarkshire Council **Business Regulation Service**

Fleming House Tryst Road Cumbernauld G67 1DZ

Technical Enquiries: Mass Spec

Phone 0141 276 0628 @Glasgow.Gov.uk

Fax 0141 276 0669

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

24/10/2019

Sampled by:

Sample Type:

Tenax - Volatile Organic Compounds

Site:

St Ambrose High PE Base 1102

Sample Point: Date/Time on:

24/10/2019 at 07:34

Date/Time off:

24/10/2019 at 08:12

Tenax I.D.

MI016154

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details:

Determination	Result	Units
Sample collected by	K Macvica	ar
Sample volume	7.086	litres
Total VOC ng	771	ng
Total VOC mg/m3	0.109	mg/m^3
methanol	0.0377	mg/m^3
Nonanal	0.0036	
Butan-1-ol	0.0010	mg/m^3
Decamethyl cyclopentasiloxane	0.0120	mg/m^3
Acetic acid	0.0029	mg/m^3
2-ethyl hexanol	0.0022	mg/m^3
Limonene	0.0012	
1,2-cylcopropylhexane	0.0008	mg/m^3
Arcosolv	0.0020	mg/m^3
Benzene	0.0002	

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Test Details Continued:

Determination

Result

Units

Toluene

8000.0

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported, in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.109 mg/m3. This TVOC was within the range we expect for
- 2. The following comment is related to the total volatile organic contamination (TVOC). There are no definitive targets for non-industrial indoor air environments, however, various guidelines have been proposed for the Health Effects of TVOC concentration ranges.

The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air.

Odour complaints, irritation and discomfort, 0.2 - 3.0 mg/m3.

The TVOC level is below this range.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and
- 4. Benzene level of 0.0002 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m^3. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- 10. Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv is used in adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products. 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon. The

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Test Details Continued:

Determination

Result

<u>Units</u>

recent refurbishments that have occurred could have contributed to a number of the compounds detected.

Approved Signatory:





64 Everard Drive, Springburn, Glasgow, G21 1XG

Test Report

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70653638

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North Lanarkshire Council **Business Regulation Service**

Fleming House Tryst Road Cumbernauld G67 1DZ

Technical Enquiries: Mass Spec

Phone 0141 276 0628 @Glasgow.Gov.uk Fax 0141 276 0669

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

24/10/2019

Sampled by:

Sample Type:

Tenax - Volatile Organic Compounds

Site:

St Ambrose High

Sample Point:

Science 9, 2064 Sink 1 left hand side of door

Date/Time on:

24/10/2019 at 07:20

Date/Time off:

24/10/2019 at 07:53

Tenax I.D.

MI016152

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details:

Determination	Result	Units
Sample collected by		
	K Macvicar	
Sample volume	6.154	litres
Total VOC ng	1505	ng
Total VOC mg/m3	0.245	mg/m^3
methanol	0.0365	mg/m^3
Nonanal	0.0074	
Butan-1-ol	0.0142	mg/m^3
Decamethyl cyclopentasiloxane	0.0103	mg/m^3
Acetic acid	0.0332	mg/m^3
2-ethyl hexanol	0.0077	mg/m^3
Limonene	0.0040	
1,2-cylcopropylhexane	0.0080	mg/m^3
Arcosolv	0.0016	mg/m^3
Benzene	0.0003	

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Test Details Continued:

Determination

Result

Units

Toluene

0.0069

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported, in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.245 mg/m3. This TVOC was within the range we expect for indoor air.
- 2. The following comments are related to the total volatile organic contamination (TVOC). The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air. Odour complaints, irritation and discomfort can occur between 0.2 3.0 mg/m3.

The TVOC level detected is just above the lower end of this range and would not be expected to cause a complaint.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and painting.
- 4. Benzene level of 0.0003 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m³. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- 10. Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv is used in adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products. 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon. The recent refurbishments that have occurred could have contributed to a number of the compounds detected.

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Determination

Result <u>Units</u>

Approved Signatory:



Chemist



64 Everard Drive, Springburn, Glasgow, G21 1XG

Test Report

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70653631

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North Lanarkshire Council **Business Regulation Service** Fleming House

Tryst Road Cumbernauld G67 1DZ

Technical Enquiries: Mass Spec Phone 0141 276 0628

@Glasgow.Gov.uk Fax 0141 276 0669

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

24/10/2019

Sampled by:

Sample Type:

Tenax - Volátile Organic Compounds

Site:

St Ambrose High

Sample Point:

Cafe area - in middle 23/10/2019 at 17:05

Date/Time on: Date/Time off:

23/10/2019 at 17:35

Tenax I.D.

MI016007

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details:

Determination	Result	Units
Sample collected by	K Macvica	
Sample volume	5.594	litres
Total VOC ng	1180	ng
Total VOC mg/m3	0.211	mg/m^3
methanol	0.0225	mg/m^3
Nonanal	0.0093	
Butan-1-ol	0.0086	mg/m^3
Decamethyl cyclopentasiloxane	0.0089	mg/m^3
Acetic acid	0.0110	mg/m^3
2-ethyl hexanol	0.0070	mg/m^3
Limonene	0.0062	
1,2-cylcopropylhexane	0.0074	mg/m^3
Arcosolv	0.0058	mg/m^3
Benzene	0.0002	

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Test Details Continued:

Determination

Result

Units

Toluene

0.0035

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported, in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.211 mg/m3. This TVOC was within the range we expect for indoor air.
- 2. The following comments are related to the total volatile organic contamination (TVOC). The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air. Odour complaints, irritation and discomfort can occur between 0.2 3.0 mg/m3.

The TVOC level detected is just above the lower end of this range and would not be expected to cause a complaint.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and painting.
- 4. Benzene level of 0.0002 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m^3. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- 10. Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv is used in adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products. 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon. The recent refurbishments that have occurred could have contributed to a number of the compounds detected.

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Client Ref No: AIR TESTS
Report Date: 4 December 2019

Test Report No: 70653631

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Test Details Continued:

Determination

Result Units

Approved Signatory:





64 Everard Drive, Springburn, Glasgow, G21 1XG

Test Report

Client Ref No. AIR TESTS

Report Date: 4 December 2019 Test Report No:

70653632

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North Lanarkshire Council **Business Regulation Service** Fleming House

Tryst Road Cumbernauld G67 1DZ

Technical Enquiries: Mass Spec Phone 0141 276 0628

@Glasgow.Gov.uk Fax 0141 276 0669

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

24/10/2019

Sampled by:

Sample Type:

Tenax - Volatile Organic Compounds

Site:

St Ambrose High

Sample Point:

Snack bar in dinning area

Date/Time on:

23/10/2019 at 17:07

Date/Time off:

23/10/2019 at 17:37

Tenax I.D.

MI016169

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere

and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details:

Determination	<u>Result</u>	<u>Units</u>
Sample collected by	K Macvica	ar
Sample volume	5.594	litres
Total VOC ng	985	ng
Total VOC mg/m3	0.176	mg/m^3
methanol	0.0329	mg/m^3
Nonanal	0.0101	
Butan-1-ol	0.0089	mg/m^3
Decamethyl cyclopentasiloxane	0.0088	mg/m^3
Acetic acid	0.0057	mg/m^3
2-ethyl hexanol	0.0093	mg/m^3
Limonene	0.0061	
1,2-cylcopropylhexane	0.0104	mg/m^3
Arcosolv	0.0057	mg/m^3
Benzene	0.0004	

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Test Report No: 70653632

Issue No:

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Test Details Continued :

Determination

Result

Toluene

<u>Units</u> 0.0035

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported. in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.176 mg/m3. This TVOC was within the range we expect for indoor air.
- 2. The following comment is related to the total volatile organic contamination (TVOC). There are no definitive targets for non-industrial indoor air environments, however, various guidelines have been proposed for the Health Effects of TVOC concentration ranges.

The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air.

Odour complaints, irritation and discomfort, 0.2 - 3.0 mg/m3.

The TVOC level is below this range.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and painting.
- 4. Benzene level of 0.0004 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m³. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv is used in adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products. 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon. The

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Test Details Continued:

Determination

Result

<u>Units</u>

recent refurbishments that have occurred could have contributed to a number of the compounds detected.

Approved Signatory:



Chemist



64 Everard Drive, Springburn, Glasgow, G21 1XG

Test Report

Client Ref No: AIR TESTS Report Date:

4 December 2019

Test Report No: 70653636

Issue No:

Page: 1 of 3 Contract: NLBLOCK

Fax 0141 276 0669

North Lanarkshire Council **Business Regulation Service** Fleming House Tryst Road Cumbernauld

Technical Enquiries: Mass Spec Phone 0141 276 0628 @Glasgow.Gov.uk

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

24/10/2019

Sampled by: Sample Type:

G67 1DZ

Tenax - Volatile Organic Compounds

Site:

St Ambrose High

Sample Point:

Pupil 1st floor wash hand basin, 1st sink

Date/Time on:

24/10/2019 at 07:26

Date/Time off:

24/10/2019 at 07:58

Tenax I.D.

MI016151

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details:

Determination	Result	<u>Units</u>
Sample collected by	K Macvica	ar
Sample volume	5.669	litres
Total VOC ng	846	ng
Total VOC mg/m3	0.149	mg/m^3
methanol	0.0031	mg/m^3
Nonanal	0.0053	
Butan-1-ol	0.0073	mg/m^3
Decamethyl cyclopentasiloxane	0.0035	mg/m^3
Acetic acid	0.0346	mg/m^3
2-ethyl hexanol	0.0044	mg/m^3
Limonene	0.0026	
1,2-cylcopropylhexane	0.0046	mg/m^3
Arcosolv	0.0009	mg/m^3
Benzene	0.0002	

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Test Details Continued:

Determination

Result

Toluene

0.0049

<u>Units</u>

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported, in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.149 mg/m3. This TVOC was within the range we expect for indoor air.
- 2. The following comment is related to the total volatile organic contamination (TVOC). There are no definitive targets for non-industrial indoor air environments, however, various guidelines have been proposed for the Health Effects of TVOC concentration ranges.

The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air.

Odour complaints, irritation and discomfort, 0.2 - 3.0 mg/m3.

The TVOC level is below this range.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and painting.
- 4. Benzene level of 0.0003 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m^3. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- 10. Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv is used in adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products. 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon. The

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Test Details Continued:

Determination

Result Units

recent refurbishments that have occurred could have contributed to a number of the compounds detected.

Approved Signatory:





64 Everard Drive, Springburn, Glasgow, G21 1XG

Test Report

Client Ref No: AIR TESTS

Report Date: 4 December 2019 Test Report No: 70653637

Issue No:

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North Lanarkshire Council **Business Regulation Service**

Fleming House Tryst Road Cumbernauld G67 1DZ

Technical Enquiries: Mass Spec Phone 0141 276 0628 @Glasgow.Gov.uk Fax 0141 276 0669

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

24/10/2019

Sampled by:

Sample Type:

Tenax - Volatile Organic Compounds

Site:

St Ambrose High

Sample Point:

Science 8, 2065 Sink at teachers desk

Date/Time on:

24/10/2019 at 07:18

Date/Time off:

24/10/2019 at 07:51

Tenax I.D.

MI016010

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere

and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details:

Determination	Result	<u>Units</u>
Sample collected by	K Macvicar	
Sample volume	7.385	litres
Total VOC ng	1611	ng
Total VOC mg/m3	0.218	mg/m^3
methanol	0.0246	mg/m^3
Nonanal	0.0068	
Butan-1-ol	0.0108	mg/m^3
Decamethyl cyclopentasiloxane	0.0057	mg/m^3
Acetic acid	0.0136	mg/m^3
2-ethyl hexanol	0.0076	mg/m^3
Limonene	0.0033	
1,2-cylcopropylhexane	0.0071	mg/m^3
Arcosolv	0.0024	mg/m^3
Benzene	0.0003	

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Client Ref No: AIR TESTS Test Report No: 70653637 Report Date:

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Test Details Continued:

Determination Units Result

Toluene 0.0051

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported, in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.218 mg/m3. This TVOC was within the range we expect for indoor air.
- 2. The following comments are related to the total volatile organic contamination (TVOC). The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air. Odour complaints, irritation and discomfort can occur between 0.2 - 3.0 mg/m3.

The TVOC level detected is just above the lower end of this range and would not be expected to cause a complaint.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and painting.
- 4. Benzene level of 0.0003 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m³. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- 10. Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv is used in adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products. 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon. The recent refurbishments that have occurred could have contributed to a number of the compounds detected.

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Test Details Continued:

Determination

Result

Units

Approved Signatory:



Chemist



64 Everard Drive, Springburn, Glasgow, G21 1XG

Test Report

Client Ref No.: AIR TESTS

Report Date: 4 December 2019 Test Report No:

70653633

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North Lanarkshire Council **Business Regulation Service**

Fleming House Tryst Road Cumbernauld G67 1DZ

Technical Enquiries: Mass Spec Phone 0141 276 0628

> @Glasgow.Gov.uk Fax 0141 276 0669

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

24/10/2019

Sampled by:

Sample Type:

Tenax - Volatile Organic Compounds

Site:

St Ambrose High

Sample Point:

HE2 1033 sink at Door (food odour in class)

Date/Time on:

23/10/2019 at 17:20

Date/Time off: Tenax I.D.

23/10/2019 at 17:51 MI018510

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere

and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details:

Determination	Result	<u>Units</u>
Sample collected by	K Macvicar	
Sample volume	6.215	litres
Total VOC ng	1314	ng
Total VOC mg/m3	0.211	mg/m^3
methanol	0.0099	mg/m^3
Nonanal	0.0117	
Butan-1-ol	0.0200	mg/m^3
Decamethyl cyclopentasiloxane	0.0042	mg/m^3
Acetic acid	0.0255	mg/m^3
2-ethyl hexanol	0.0034	mg/m^3
Limonene	0.0051	
1,2-cylcopropylhexane	0.0038	mg/m^3
Arcosolv	0.0258	mg/m^3
Benzene	0.0003	

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Test Details Continued:

Determination

Result

Toluene

0.0074

Units

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported, in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.211 mg/m3. This TVOC was within the range we expect for indoor air.
- 2. The following comments are related to the total volatile organic contamination (TVOC). The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air. Odour complaints, irritation and discomfort can occur between 0.2 3.0 mg/m3.

The TVOC level detected is just above the lower end of this range and would not be expected to cause a complaint.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and painting.
- 4. Benzene level of 0.0003 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m^3. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- 10. Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv is used in adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products. 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon. The recent refurbishments that have occurred could have contributed to a number of the compounds detected.

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Test Report No: 7

70653633

Issue No:

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Test Details Continued:

Determination

Result Units

Approved Signatory:





64 Everard Drive, Springburn, Glasgow, G21 1XG

Test Report

Client Ref No: AIR TESTS

Report Date: 4 December 2019 Test Report No:

70653634

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Contract: NLBLOCK

Fax 0141 276 0669

North Lanarkshire Council **Business Regulation Service** Fleming House Tryst Road Cumbernauld

Technical Enquiries: Mass Spec Phone 0141 276 0628 @Glasgow.Gov.uk

Sample Details:

Client's Description: Volatile Organic Compounds

Date received:

G67 1DZ

24/10/2019

Sampled by:

Sample Type:

Tenax - Volatile Organic Compounds

Site:

St Ambrose High Maths 1 R1077

Sample Point:

23/10/2019 at 17:16

Date/Time on: Date/Time off:

23/10/2019 at 17:43

Tenax I.D.

MI016007

Test Note:

Tenax adsorption tubes are used to absorb volatile and semi volatile organic compounds in the atmosphere and do not distinguish between the background odours in a room (e.g. cleaning and personal hygiene

products) and the complaint odours.

TVOC - Total Volatile Organic Contamination, is the Total of VOC detected in the sample tube

Test Details :

Determination	Result	<u>Units</u>	
Sample collected by	K Macvica	K Macvicar	
Sample volume	5.035	litres	
Total VOC ng	1510	ng	
Total VOC mg/m3	0.300	mg/m^3	
methanol	0.0187	mg/m^3	
Nonanal	0.0051		
Butan-1-ol	0.0129	mg/m^3	
Decamethyl cyclopentasiloxane	0.0130	mg/m^3	
Acetic acid	0.0152	mg/m^3	
2-ethyl hexanol	0.0026	mg/m^3	
Limonene	0.0082		
1,2-cylcopropylhexane	0.0017	mg/m^3	
Arcosolv	0.0678	mg/m^3	
Benzene	0.0002		

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Client Ref No: AIR TESTS
Report Date: 4 December 2019

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Test Details Continued:

Determination

Result

Units

Toluene

0.0015

Opinions/Comments:

The chromatographic profile of the atmospheres of air samples 70653631 - 70643640 were similar. Compounds reported, in the most part, form the top compounds detected.

- 1. The total volatile organic contamination (TVOC) was 0.300 mg/m3. This TVOC was within the range we expect for indoor air.
- 2. The following comments are related to the total volatile organic contamination (TVOC). The statement below is from Molhave: "Volatile Organic Compounds, Indoor Air Quality and Health" states the health effects may be experienced at the following concentrations of VOCs in indoor air. Odour complaints, irritation and discomfort can occur between 0.2 3.0 mg/m3.

The TVOC level detected is just above the lower end of this range and would not be expected to cause a complaint.

- 3. Compounds detected are not unusual for a school environment where there has been recent refurbishment and painting.
- 4. Benzene level of 0.0002 mg/m3 was considerably lower then The Expert Panel Air Quality Standards (EPAQS) in Table D4 of document IPPC H1 Horizontal Guidance Note, which states that the annual mean for benzene is 0.005 mg/m^3. Benzene, for example is a combustion product of coal, wood fuels and car exhausts.
- 5. Toluene is a common solvent, found in paints, paint thinners, silicone sealants, rubber, adhesives (glues), lacquers and disinfectants.
- 6. Ethanol can be from a number of sources, such as perfumes, air fresheners and cleaning products.
- 7. Methanol is the solvent used to prepare the internal standard injected on the sample before the sample is taken and not usually mentioned in the results. However, the level of methanol was higher than expected so there could be a local contribution to the sample. Methanol can be in, for example, antibacterial cleaners and glass cleaner.
- 8. Ethyl hexanol is a compound associated with plasticisers, coatings, adhesives and flooring.
- 9. Decamethyl cyclopentasiloxane DMPS, is an oily odourless solvent which is commonly used in paints, deodorants, hairsprays, polishes and many other cleaning materials.
- 10. Acetic acid can be from adhesives, food and cleaning products.
- 11. Arcosolv is used in adhesive products.
- 12. Butano-1-ol, limonene and nonanal are common compounds found in cleaning products, 1,2-cyclopropanehexane could also be used in cleaning products.
- 13. In summary, the compounds detected in the atmosphere and the concentration levels were not uncommon. The recent refurbishments that have occurred could have contributed to a number of the compounds detected.

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Client Ref No.: AIR TESTS
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Test Details Continued :

Determination

Result Units

Approved Signatory:

