

Customer details:

SATRA reference: CHM0248297/1630/EN  
/E

Your reference:

Date of report: 2<sup>nd</sup> January 2018

Samples received: 15<sup>th</sup> August 2016 and  
30<sup>th</sup> November 2017

Date(s) work carried out: 23<sup>rd</sup> August to 11<sup>th</sup>  
October 2016 and 5<sup>th</sup>  
to 7<sup>th</sup> December 2017

For the attention of: Cho Sow Fong

## TECHNICAL REPORT

Subject:

Chemical innocuousness testing of gloves in accordance with BS EN 420: 2003 + A1: 2009 and BS EN 16523-1:2015 resistance to permeation by chemicals on gloves described as Powder Free Nitrile gloves, non-sterile. 63-225PF

### Conditions of Issue:

This report may be forwarded to other parties provided that it is not changed in any way. It must not be published, for example by including it in advertisements, without the prior, written permission of SATRA.

Results given in this report refer only to the samples submitted for analysis and tested by SATRA. Comments are for guidance only.

Tests marked  $\neq$  fall outside the UKAS Accreditation Schedule for SATRA. All interpretations of results of such tests and the comments based upon them are outside the scope of UKAS accreditation and are based on current SATRA knowledge.

**A satisfactory test report in no way implies that the product tested is approved by SATRA and no warranty is given as to the performance of the product tested. SATRA shall not be liable for any subsequent loss or damage incurred by the client as a result of information supplied in the report.**

The uncertainty of the results (UoM) in this report is based on a standard uncertainty multiplied by a coverage factor  $k=2$ , which provides for a confidence level of approximately 95%.

Report signed by: Emma Norris  
Position: Chemical Technologist  
Department: Chemical & Analytical Technology

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## WORK REQUESTED:

Samples of gloves described as Powder Free Nitrile gloves, non-sterile (blue, lot number 160216-08-2-03 and white, lot number 090516-04-1-03) were received on the 15<sup>th</sup> August 2016 for testing in accordance with BS EN 16523-1:2015 and assessment in accordance with the requirements of BS EN 374-1:2003 and the innocuousness requirements of BS EN 420:2003 + A1:2009. Testing against 30% hydrogen peroxide was carried out on gloves received on the 30<sup>th</sup> November 2017 described as PFN Powder free nitrile gloves non-sterile and originally reported under SATRA reference CHM0265053/1748/EN/B.

## TESTS REQUIRED:

- #SATRA SOP CAT-018 – Determination of PAHs (based on ZEK 01.4-08)
- BS EN 16523-1:2015 - Determination of material resistance to permeation by chemicals. Part 1: Permeation by liquid chemical under conditions of continuous contact

## CONCLUSIONS:

The samples of gloves described as Powder Free Nitrile gloves, non-sterile (blue, lot number 160216-08-2-03 and white, lot number 090516-04-1-03) were assessed in accordance with the innocuousness requirements of BS EN 420:2003 + A1:2009 and were found to meet with the REACH annex XVII requirement for PAHs. When tested in accordance with BS EN 16523-1:2015 the gloves achieved the following performance levels. Full results are given in the tables below.

Chemical	Performance level
40% Sodium hydroxide (CAS: 1310-73-2)	6
10-13% Sodium hypochlorite (CAS: 7681-52-9)	6
50% Sulphuric acid (CAS: 7664-93-9)	6
65% Nitric acid (CAS: 7697-37-2)	The samples tested did not meet with the minimum breakthrough time for a performance level 1 to be achieved
10% Acetic acid (CAS: 64-19-7)	4
99% Acetic acid (CAS: 64-19-7)	The samples tested did not meet with the minimum breakthrough time for a performance level 1 to be achieved
25% Ammonium hydroxide (CAS: 1336-21-6)	1
4% Chlorhexidine digluconate (CAS: 18472-51-0)*	6
5% Ethidium bromide (CAS: 1239-45-8)	6
37% Formaldehyde (CAS: 50-00-0)	3
50% Glutaraldehyde (CAS: 111-30-8)	6
0.1% Phenol (CAS: 108-95-2)	6
30% Hydrogen peroxide (CAS: 7722-84-1)	2
1.5% Methanol in water (CAS: 67-56-1)	6

70% Isopropanol (CAS: 67-63-0)	The samples tested did not meet with the minimum breakthrough time for a performance level 1 to be achieved
35% Ethanol (CAS: 64-17-5)	The samples tested did not meet with the minimum breakthrough time for a performance level 1 to be achieved

\*Minimum detectable permeation rate is 7µg/cm<sup>2</sup>/min

## RESULTS AND REQUIREMENTS:

### #SATRA SOP CAT-018 – Determination of PAHs

Analysed by Gas Chromatography with Mass Spectrometry (GC-MS)

Sample	PAHs detected (mg/kg)	Pass/Fail
Powder Free Nitrile gloves, non-sterile (blue, lot number 160216-08-2-03)	<0.2 (of each PAH listed in the appendices)	Pass
Powder Free Nitrile gloves, non-sterile (white, lot number 090516-04-1-03)	<0.2 (of each PAH listed in the appendices)	Pass
<b>Requirements: REACH 1907/2006 annex XVII entry number 50</b>	<b>&lt;1mg/kg of each PAH listed in the appendices</b>	-

The performance levels are as given in table 1 of BS EN 374-1:2003 and are based on the lowest individual result achieved per chemical.

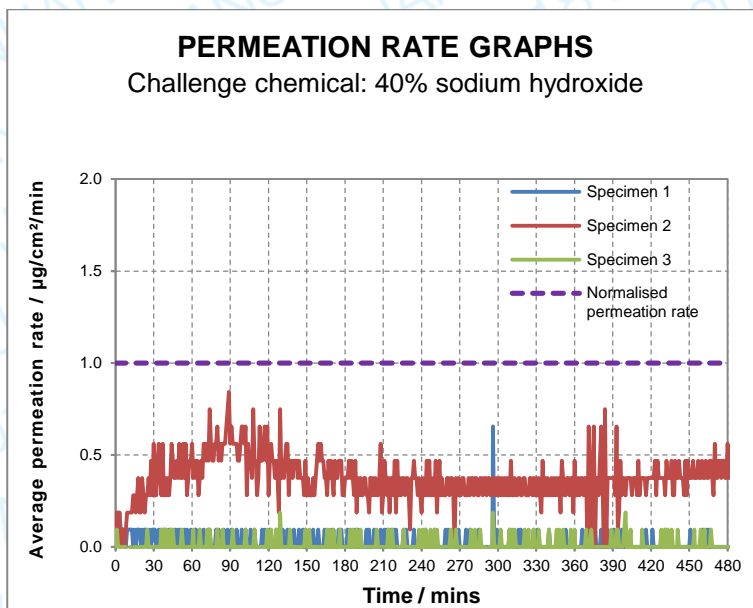
BS EN 374-1:2003 Table 1. Permeation performance levels

Permeation performance level	Measured breakthrough time (minutes)
1	>10
2	>30
3	>60
4	>120
5	>240
6	>480

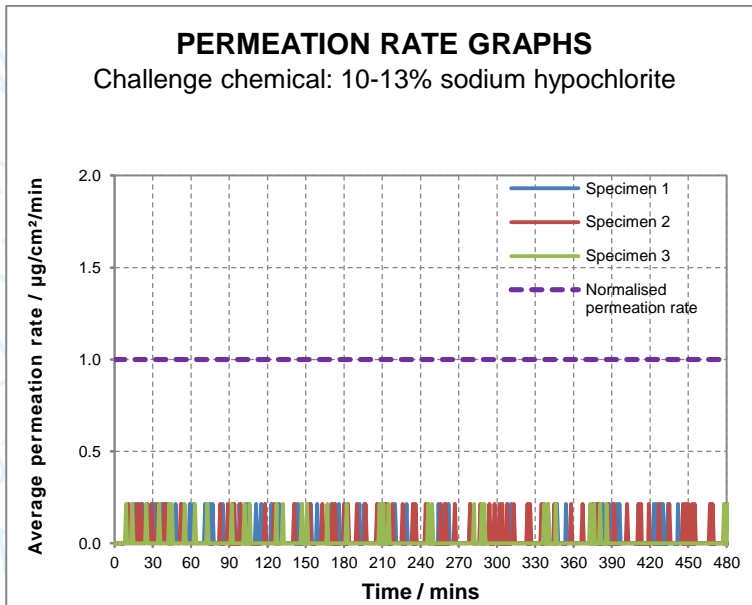
Test specimen thicknesses less than 1mm are subject to a significant measurement uncertainty and are therefore provided for information only.

Mixed samples of blue and white specimens were selected for the triplicate tests with the exception of 30% hydrogen peroxide which was tested on blue gloves received on the 30<sup>th</sup> November 2017.

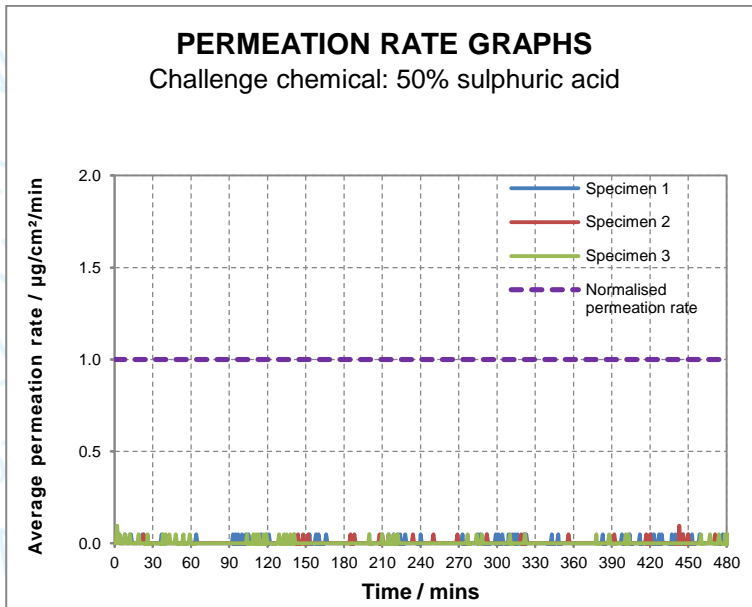
Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
BS EN 16523-1:2015 in accordance with SATRA SOP CAT-009  Using PTFE permeation cells with standardised dimensions	<b>Test information:</b>	Chemical: 40% sodium hydroxide		<b>Level 6</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: Conductimetry (continuous measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<math>\Delta</math></b>	<b>Breakthrough time (mins)</b>	
	1	0.06	>480	
	2	0.06	>480	
	3	0.06	>480	
	<b>Test result:</b>	<b>&gt;480</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:				No change



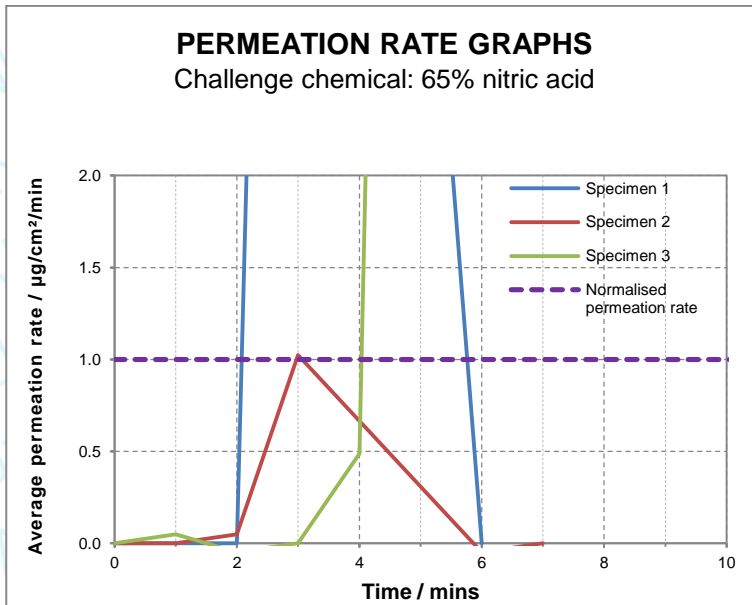
Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
<p>BS EN 16523-1:2015 in accordance with SATRA SOP CAT-009</p> <p>Using PTFE permeation cells with standardised dimensions</p>	<b>Test information:</b>	Chemical: 10-13% sodium hypochlorite		<b>Level 6</b>
		Normalised permeation rate (NPR): 2 µg/cm <sup>2</sup> /min		
		Detection technique: Conductimetry (continuous measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<math>\Delta</math></b>	<b>Breakthrough time (mins)</b>	
	1	0.06	>480	
	2	0.06	>480	
	3	0.06	>480	
	<b>Test result:</b>	<b>&gt;480</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	Slight discolouration			



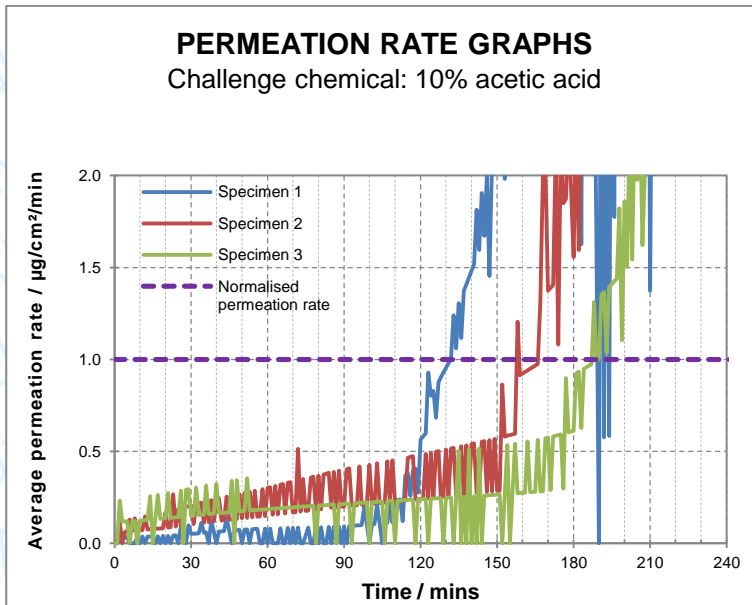
Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
<p>BS EN 16523-1:2015 in accordance with SATRA SOP CAT-009</p> <p>Using PTFE permeation cells with standardised dimensions</p>	<b>Test information:</b>	Chemical: 50% sulphuric acid		<b>Level 6</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: Conductimetry (continuous measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<math>\Delta</math></b>	<b>Breakthrough time (mins)</b>	
	1	0.07	>480	
	2	0.06	>480	
	3	0.06	>480	
	<b>Test result:</b>	<b>&gt;480</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	Slight discolouration			



Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
<p>BS EN 16523-1:2015 in accordance with SATRA SOP CAT-009</p> <p>Using PTFE permeation cells with standardised dimensions</p>	<b>Test information:</b>	Chemical: 65% nitric acid		<p><b>The samples tested did not meet with the minimum breakthrough time for a performance level 1 to be achieved</b></p>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: Conductimetry (continuous measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<math>\Delta</math></b>	<b>Breakthrough time (mins)</b>	
	1	0.06	3	
	2	0.07	3	
	3	0.06	5	
	<b>Test result:</b>	<b>3</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	Discoloured and brittle			

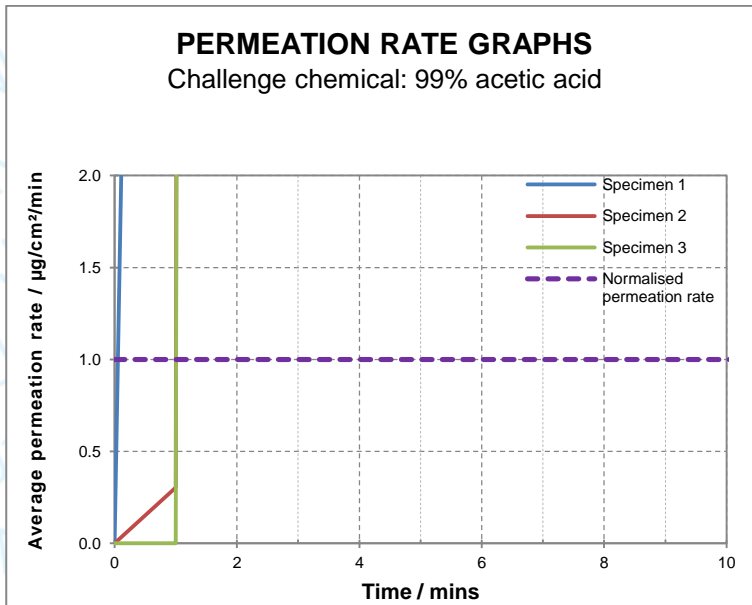


Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
BS EN 16523-1:2015 in accordance with SATRA SOP CAT-009  Using PTFE permeation cells with standardised dimensions	<b>Test information:</b>	Chemical: 10% acetic acid		<b>Level 4</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: Conductimetry (continuous measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<math>\Delta</math></b>	<b>Breakthrough time (mins)</b>	
	1	0.06	132	
	2	0.06	167	
	3	0.06	190	
	<b>Test result:</b>	<b>131</b>		
	<b>UoM:</b>	<b>1</b>		
Visual appearance of specimens after testing:	No change			

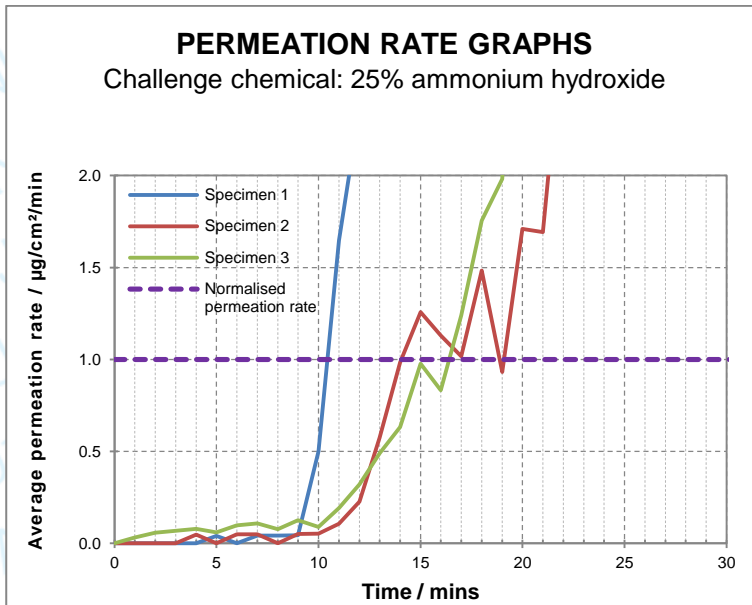




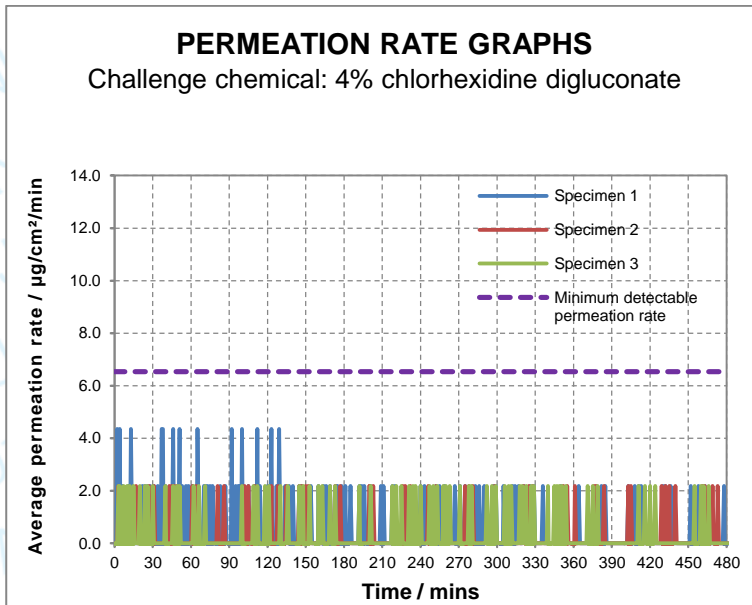
Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
BS EN 16523-1:2015 in accordance with SATRA SOP CAT-009  Using PTFE permeation cells with standardised dimensions	<b>Test information:</b>	Chemical: 99% acetic acid		<b>The samples tested did not meet with the minimum breakthrough time for a performance level 1 to be achieved</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: Conductimetry (continuous measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<math>\Delta</math></b>	<b>Breakthrough time (mins)</b>	
	1	0.06	2	
	2	0.05	2	
	3	0.06	2	
	<b>Test result:</b>	<b>2</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	Discoloured			



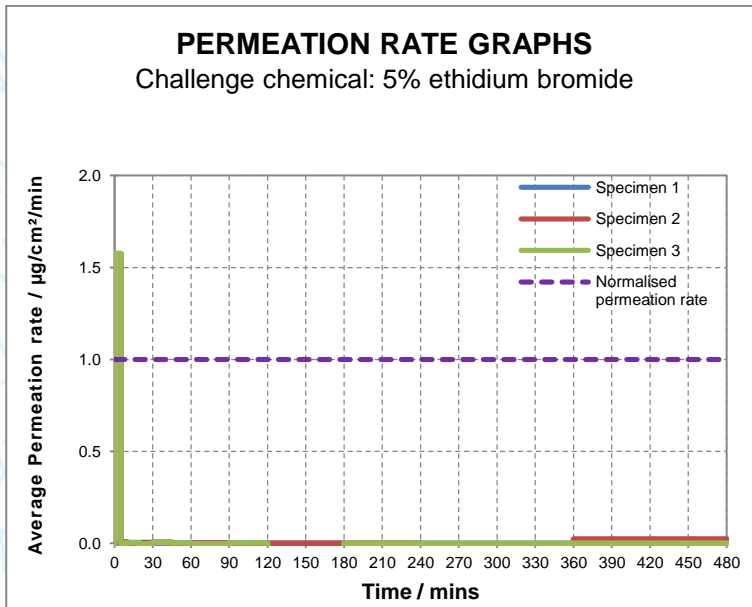
Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
<p>BS EN 16523-1:2015 in accordance with SATRA SOP CAT-009</p> <p>Using PTFE permeation cells with standardised dimensions</p>	<b>Test information:</b>	Chemical: 25% ammonium hydroxide		<b>Level 1</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: Conductimetry (continuous measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<math>\Delta</math></b>	<b>Breakthrough time (mins)</b>	
	1	0.06	11	
	2	0.06	15	
	3	0.07	17	
	<b>Test result:</b>	<b>11</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	Discoloured			



Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
BS EN 16523-1:2015 in accordance with SATRA SOP CAT-009  Using PTFE permeation cells with standardised dimensions	<b>Test information:</b>	Chemical: 4% chlorhexidine digluconate		<b>Level 6</b>
		Normalised permeation rate (NPR): 7 µg/cm <sup>2</sup> /min		
		Detection technique: Conductimetry (continuous measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<sup>Δ</sup></b>	<b>Breakthrough time (mins)</b>	
	1	0.07	>480	
	2	0.07	>480	
	3	0.06	>480	
	<b>Test result:</b>	<b>&gt;480</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	No change			



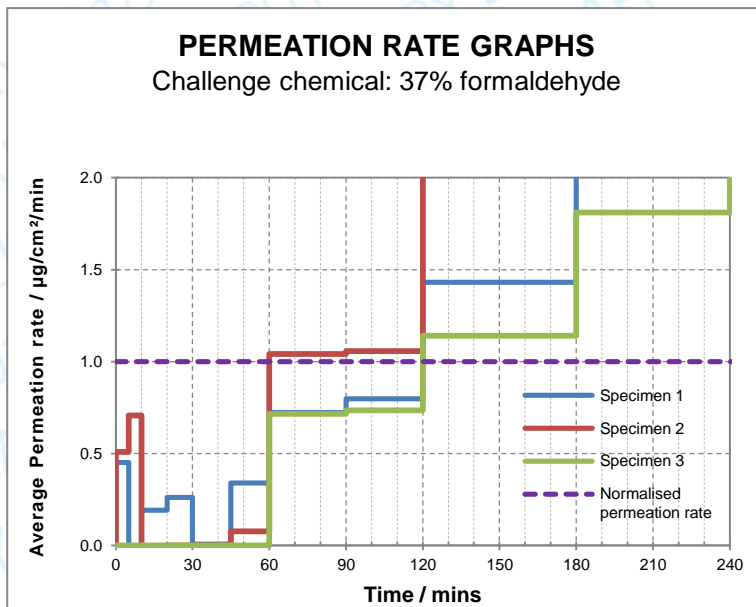
Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
BS EN 16523-1:2015 in accordance with SATRA SOP CAT-025  Using PTFE permeation cells with standardised dimensions	<b>Test information:</b>	Chemical: 5% ethidium bromide		<b>Level 6</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: Spectrophotometry (periodic measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)△</b>	<b>Breakthrough time (mins)▽</b>	
	1	0.08	>480	
	2	0.09	>480	
	3	0.10	>480	
	<b>Test result:</b>	<b>&gt;480</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	No change			



Ethidium bromide is determined by discrete sampling; therefore the permeation rate graph is not a smooth curve. The reading from specimen 13 up to 5 minutes was considered to be an outlier and not a breakthrough.

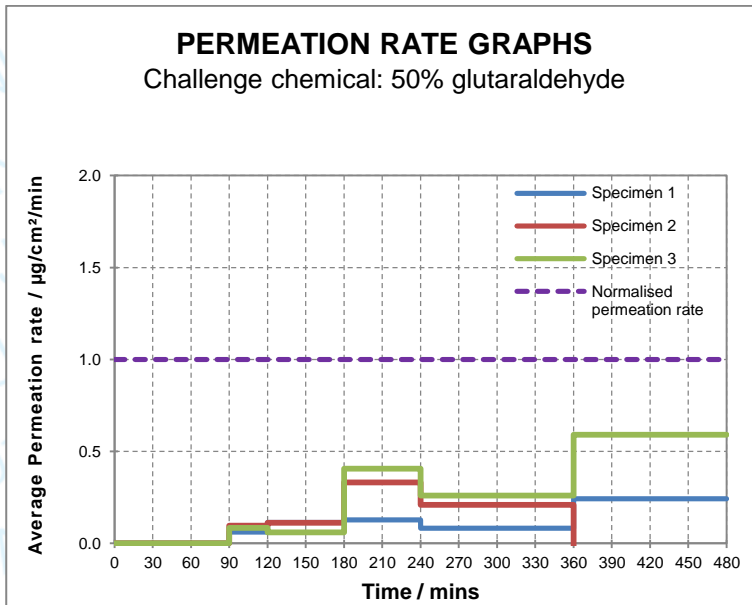
Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
BS EN 16523-1:2015 in accordance with SATRA SOP CAT-025  Using PTFE permeation cells with standardised dimensions	<b>Test information:</b>	Chemical: 37% formaldehyde		<b>Level 3</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: Spectrophotometry (periodic measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<sup>Δ</sup></b>	<b>Breakthrough time (mins)<sup>▽</sup></b>	
	1	0.06	Between 121 to 180	
	2	0.06	Between 61 to 90	
	3	0.06	Between 121 to 180	
	<b>Test result:</b>	<b>Between 61 to 90</b>		
	<b>UoM:</b>	<b>See below</b>		
Visual appearance of specimens after testing:	Slight discolouration			

For SOP CAT-025, where both the P<sub>1</sub> and P<sub>v</sub> are observed in the same sampling range, uncertainty is expressed as the time difference between the mid-point of the range and the previous sampling time. This uncertainty is included in the reported result.



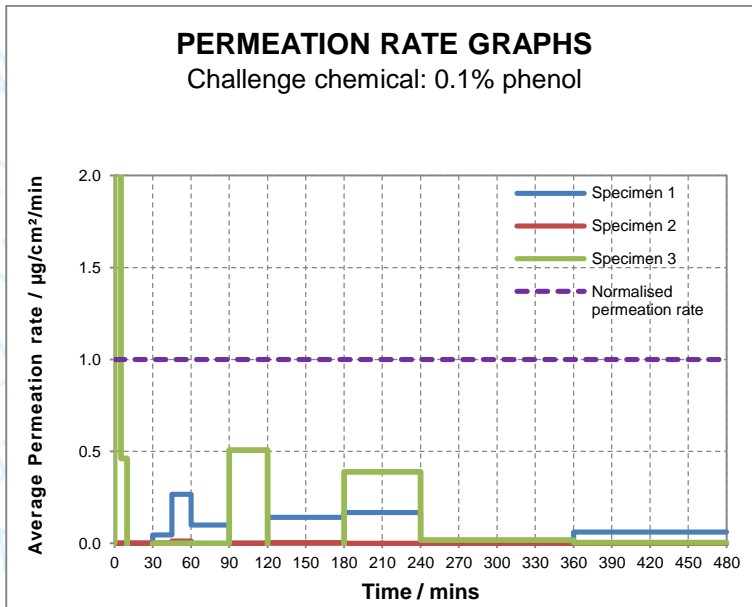
Formaldehyde is determined by discrete sampling; therefore the permeation rate graph is not a smooth curve.

Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
BS EN 16523-1:2015 in accordance with SATRA SOP CAT-025  Using PTFE permeation cells with standardised dimensions	<b>Test information:</b>	Chemical: 50% glutaraldehyde		<b>Level 6</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: Spectrophotometry (periodic measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)△</b>	<b>Breakthrough time (mins)▽</b>	
	1	0.06	>480	
	2	0.06	>480	
	3	0.06	>480	
	<b>Test result:</b>	<b>&gt;480</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	Slight discolouration			



Glutaraldehyde is determined by discrete sampling; therefore the permeation rate graph is not a smooth curve.

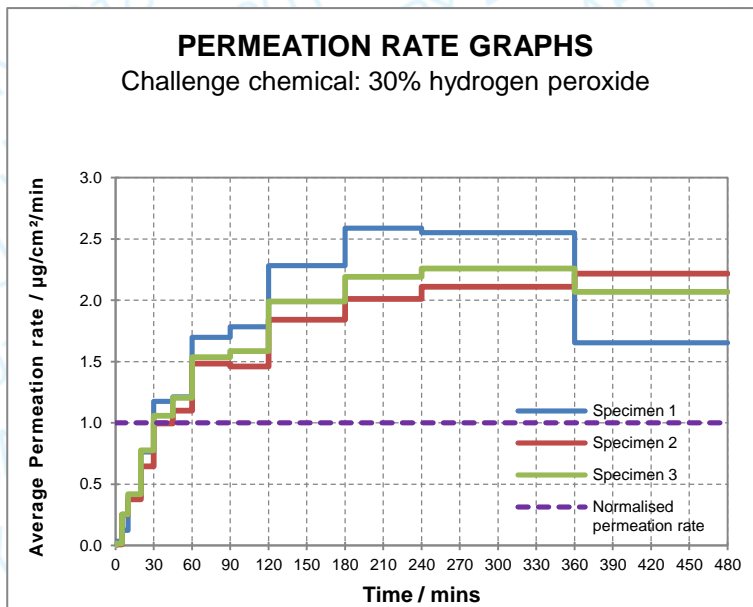
Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
BS EN 16523-1:2015 in accordance with SATRA SOP CAT-025  Using PTFE permeation cells with standardised dimensions	<b>Test information:</b>	Chemical: 0.1% phenol		<b>Level 6</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: HPLC-DAD (periodic measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<sup>Δ</sup></b>	<b>Breakthrough time (mins)<sup>▽</sup></b>	
	1	0.07	>480	
	2	0.07	>480	
	3	0.06	>480	
	<b>Test result:</b>	<b>&gt;480</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	No change			



Phenol is determined by discrete sampling; therefore the permeation rate graph is not a smooth curve. The reading from specimen 3 up to 5 minutes was considered to be an outlier and not a breakthrough.

Test/Property	Sample reference:	PFN Powder free nitrile gloves non-sterile		Performance
BS EN 16523-1:2015 in accordance with SATRA SOP CAT-025  Using PTFE permeation cells with standardised dimensions	<b>Test information:</b>	Chemical: 30% Hydrogen peroxide		<b>Level 2</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: Electrochemical detector (periodic measurement)		
		Collection medium: Deionised water (closed loop)		
		Collection medium stirring rate: 45 – 65 ml/min (each cell constant to within ± 10%)		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)Δ</b>	<b>Breakthrough time (mins)▽</b>	
	1	0.04	Between 31 to 45	
	2	0.05	Between 46 to 60	
	3	0.04	Between 31 to 45	
	<b>Test result:</b>	<b>Between 31 to 45</b>		
	<b>UoM:</b>	<b>See below</b>		
Visual appearance of specimens after testing:	Swollen			

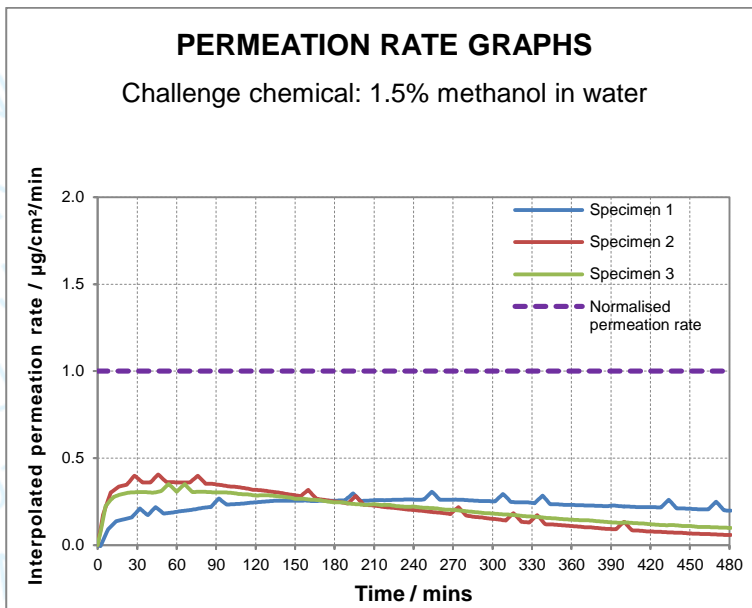
For SOP CAT-025, where both the  $P_1$  and  $P_u$  are observed in the same sampling range, uncertainty is expressed as the time difference between the mid-point of the range and the previous sampling time. This uncertainty is included in the reported result.



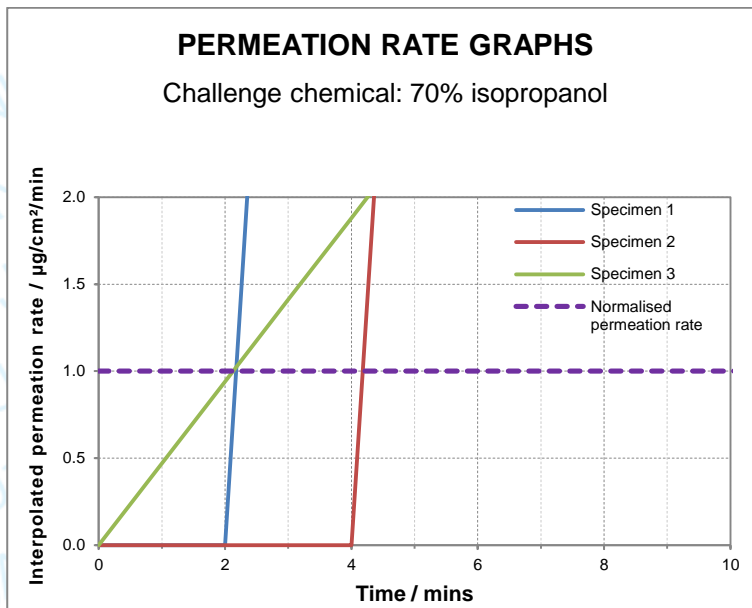
Hydrogen peroxide is determined by discrete sampling; therefore the permeation rate graph is not a smooth curve.



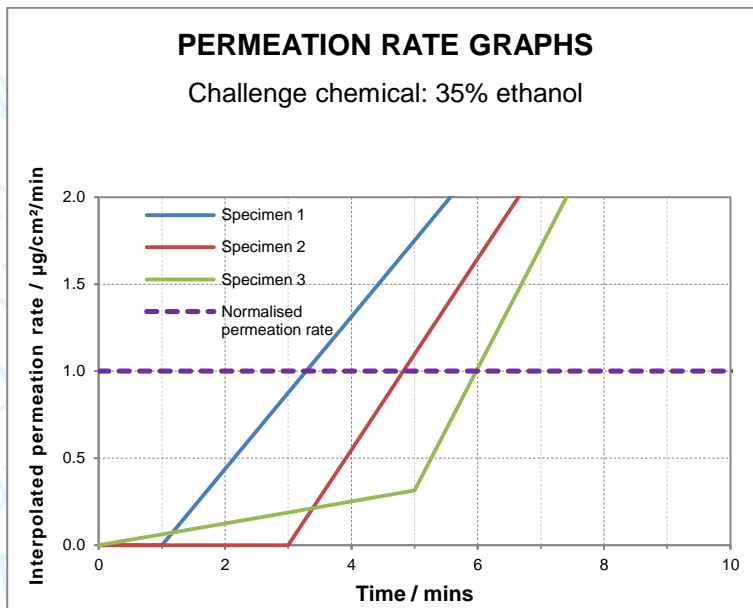
Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
<p>BS EN 16523-1:2015 in accordance with SATRA SOP CAT-005</p> <p>Using brass alloy permeation cells with standardised dimensions</p>	<b>Test information:</b>	Chemical: 1.5% methanol in water		<b>Level 6</b>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: GC-FID (periodic measurement)		
		Collection medium: Dry air (open loop)		
		Collection medium flow rate: 335 – 380 ml/min		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<sup>Δ</sup></b>	<b>Breakthrough time (mins)<sup>▲</sup></b>	
	1	0.06	>480	
	2	0.06	>480	
	3	0.06	>480	
	<b>Test result:</b>	<b>&gt;480</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	No change			



Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
<p>BS EN 16523-1:2015 in accordance with SATRA SOP CAT-005</p> <p>Using brass alloy permeation cells with standardised dimensions</p>	<b>Test information:</b>	Chemical: 70% isopropanol		<p><b>The samples tested did not meet with the minimum breakthrough time for a performance level 1 to be achieved</b></p>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: GC-FID (periodic measurement)		
		Collection medium: Dry air (open loop)		
		Collection medium flow rate: 335 – 380 ml/min		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<sup>Δ</sup></b>	<b>Breakthrough time (mins)<sup>▲</sup></b>	
	1	0.06	2	
	2	0.05	4	
	3	0.06	2	
	<b>Test result:</b>	<b>2</b>		
	<b>UoM:</b>	<b>1</b>		
Visual appearance of specimens after testing:	No change			



Test/Property	Sample reference:	Powder Free Nitrile gloves, non-sterile		Performance
<p>BS EN 16523-1:2015 in accordance with SATRA SOP CAT-005</p> <p>Using brass alloy permeation cells with standardised dimensions</p>	<b>Test information:</b>	Chemical: 35% ethanol		<p><b>The samples tested did not meet with the minimum breakthrough time for a performance level 1 to be achieved</b></p>
		Normalised permeation rate (NPR): 1 µg/cm <sup>2</sup> /min		
		Detection technique: GC-FID (periodic measurement)		
		Collection medium: Dry air (open loop)		
		Collection medium flow rate: 335 – 380 ml/min		
		Test temperature: (23 ± 1) °C		
	<b>Specimen</b>	<b>Thickness (mm)<sup>Δ</sup></b>	<b>Breakthrough time (mins)<sup>▲</sup></b>	
	1	0.06	3	
	2	0.06	4	
	3	0.06	5	
	<b>Test result:</b>	<b>3</b>		
	<b>UoM:</b>	<b>&lt;1</b>		
Visual appearance of specimens after testing:	No change			



- △ BS EN 16523-1:2015 does not require the test specimen thicknesses to be reported, this information is indicative only.
- ▲ The collection medium from each cell is analysed once every 6 minutes. Due to the complexity of the detection technique, the minimum sampling frequency for final results ≤ 60 minutes as specified in table 1 of BS EN 16523-1:2015 is not possible. Breakthrough time is calculated using linear interpolation between the discrete sampling points.
- ▼ Breakthrough expressed as a range between discrete sampling points where the average permeation rate exceeds the NPR. Due to the complexity of the detection technique, the minimum sampling frequency as specified in table 1 of BS EN 16523-1:2015 is not possible.

## APPENDICES:

REACH Regulation (EC) No 1907/2006 Annex XVII entry number 50 as amended by regulation 1272/2013

PAH	CAS Number	Requirements
Benzo[a]anthracene	56-55-3	Articles shall not be placed on the market for supply to the general public, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 1 mg/kg of any of the listed PAHs.
Chrysene	218-01-9	
Benzo[b]fluoranthene	205-99-2	
Benzo[k]fluoranthene	207-08-9	
Benzo[j]fluoranthene	205-82-3	
Benzo[e]pyrene	192-97-2	
Benzo[a]pyrene	50-32-8	
Dibenzo[a,h]anthracene	53-70-3	



Gloves described as Powder Free Nitrile gloves, non-sterile (blue, lot number 160216-08-2-03)



Gloves described as Powder Free Nitrile gloves, non-sterile (white, lot number 090516-04-1-03)



Sample described as PFN Powder free nitrile gloves non-sterile

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Unless otherwise agreed in advance, test samples will be disposed of 6 weeks after the date of the final report. If required, samples can be returned at the Customer's expense.
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  - iii. The above items are submitted to the Customer as confidential documents. Confidentiality shall continue to apply after completion of the business, but shall cease to apply to information or knowledge which may come into the public domain.
13. **CONSTRUCTION AND ARBITRATION**  
The laws of England shall govern all contracts and the parties submit to exclusive jurisdiction of the courts of England, unless otherwise agreed.

Issue Date: 1st October 2009