

<b>Office</b>	AQM China
Report number	CHLAB_custA_006
Test type	First test
Reception date	19-May-14
Test date	23-May-14
Operator	Helen

<b>Customer</b>	Customer A
Brand	Brand A
Buyer	Buyer A

<b>Supplier</b>	Supplier A
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## Designation of the samples

Season	Family	Garment category	Reference / Style	Order number	Order type
AW14	/	Underwear	FD080Z	49483	First order

Sample	Description <small>precise main or secondary fabric</small>	Construction	Composition	Color	Color code	Weight	Size
A	Underwear man	/	100%cotton	Blue	/	/	/
B	Underwear man	/	100%cotton	Grey	/	/	/
C	Underwear man	/	100%cotton	Black	/	/	/
1	Blue knit body	/	/	Blue	/	/	/
2	Grey knit body	/	/	Grey	/	/	/
3	Black knit body	/	/	Black	/	/	/
4	Black yarn outside waistband	/	/	Black	/	/	/
5	Grey yarn outside waistband	/	/	Grey	/	/	/
6	White yarn outside waistband	/	/	White	/	/	/

## Wash care instructions



## Results

### Test item

#### Physical

	A	B	C
Weight	-	-	-
Color fastness to dry rubbing before washing	Pass	Pass	Pass
Color fastness to wet rubbing before washing	Pass	Pass	Pass
Fibre content	Pass	-	-
Dimensional Stability To Washing	Pass	-	-
Determination Of Spirality After Laundering	Pass	-	-
Colourfastness To Washing	Pass	Pass	Pass

#### Chemistry

Formaldehyde Content	Pass	Pass	Pass
Banned AZO Dyes	Pass	Pass	Pass
Dimethylfumarate (DMFu) Content	Pass	Pass	Pass
SCCP Content	Pass	Pass	Pass
Alkylphenols (AP) Content	Pass	Pass	Pass

Laboratory conditions	20°C	65%RH
<b>General comments</b>	The test results <b>meet</b> the client's requirements.	

Standard	ISO 3801	Test item	Weight
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Method 5: small specimens method

Sample	C	Requirement
Weight (g/m <sup>2</sup> )	157	± 6%

The result is the average of 2 measurements.

Standard	ISO 105-X12	Test item	Color fastness to rubbing before washing
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Sample	A	B	C	Requirement
Dry	4	4-5	4-5	≥ 3-4
Wet	3	4-5	3	≥ 2-3

Standard	ISO 1833, Part 1	Test item	Fibre Content
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Sample	A	Requirement
Claim:	100% Cotton	Single: No Tolerance
Lab Analysis:	100% Cotton	Blends: ±3 % As Claim

Standard	ISO 6330	Test item	Dimensional Stability To Washing
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ISO 6330, Reference Detergent 3, Test No. 4N, Machine Wash at 40±3°C, Normal Agitation, Line Dry, 2 kg Total Load.

Sample	A	Requirement		
	Original	After 3 Washes	Shrinkage	Requirement
Waistband	65.0	64.6	-0.6	±6%
Hips	81.8	81.0	-1.0	
Front rise	20.3	20.0	-1.5	
Back rise	20.7	20.4	-1.4	
Inseam	7.0	7.0	0.0	
Out seam	23.4	23.1	-1.3	
Leg opening	40.6	40.2	-1.0	

(+) Extension

(-) Shrinkage

Standard	ISO 16322-3	Test item	Determination Of Spirality After Laundering
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ISO 16322-3, Procedure A, Normal Assessment, As Per Care Instruction, ISO 6330, Reference Detergent 3, Test N  
Machine Wash at 40±3°C, Normal Agitation, Line Dry, 2 kg Total Load

Sample	A	Requirement
	After 3 Washes	
Spirality	1.0%	±7%

Standard	ISO 105-C06	Test item	Colourfastness To Washing
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ISO 105-C06, Test No: A2S, 30-min mechanical wash at 40°C in 0.4% ECE detergent and 0.1% sodium perborate solution with 10 steel balls.

Sample	A	B	C	Requirement
Colour Change	4-5	4-5	4-5	≥ 3-4
Colour Staining				≥ 3
Acetate	4-5	4-5	4-5	
Cotton	4-5	4-5	4-5	
Nylon	4-5	4-5	4-5	
Polyester	4-5	4-5	4-5	
Acrylic	4-5	4-5	4-5	
Wool	4-5	4-5	4-5	
Cross Staining	5	5	5	

Grey Scale for Assessing Colour Change/Staining

- Grade 5 negligible or no change or staining
- Grade 4 slightly changed or stained
- Grade 3 noticeably changed or stained
- Grade 2 considerably changed or stained
- Grade 1 much changed or stained

Standard	ISO 14184-1	Test item	Formaldehyde Content
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Sample	1	4+5	6	Requirement
Formaldehyde (mg/kg)	<16	<16	<16	<16 mg/kg

Remark: According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

Standard	EN 14362-1:2012	Test item	Banned AZO Dyes
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Test specification : Banned AZO-dyes (REACH Regulation (EC) No 1907/2006 (Annex XVII, No. 43), previously restricted under Directive 2002/61/EC)

Test method : 10-60 mg/kg quantitative, >60 mg/kg semi quantitative  
 Determination by Gas Chromatography-Mass Selective Detection (GC-MSD) and Confirmation by High Performance Liquid Chromatographic Analysis (HPLC/DAD)

Requirement : 30 mg/kg, for single material

Forbidden Amines	CAS No.	Unit	Result
			1+2+3
Conclusion	--	--	Pass
4-Aminobiphenyl	92-67-1	mg/kg	ND
4,4'-Benzidine	92-87-5	mg/kg	ND
4-Chloro-2-methylaniline	95-69-2	mg/kg	ND
2-Naphthylamine	91-59-8	mg/kg	ND
o-Aminoazotoluene <sup>1</sup>	97-56-3	mg/kg	ND
5-Nitro-o-toluidine <sup>2</sup>	99-55-8	mg/kg	ND
4-Chloroaniline	106-47-8	mg/kg	ND
4-Methoxy-1,3-phenylenediamine	615-05-4	mg/kg	ND
Bis-(4-aminophenyl)methane	101-77-9	mg/kg	ND
3,3'-Dichlorobenzidine	91-94-1	mg/kg	ND
3,3'-Dimethoxybenzidine	119-90-4	mg/kg	ND
3,3'-Dimethylbenzidine	119-93-7	mg/kg	ND
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	mg/kg	ND
2-Methoxy-5-methylaniline	120-71-8	mg/kg	ND
4,4'-Methylene bis(o-chloroaniline)	101-14-4	mg/kg	ND
4,4'-Oxydianiline	101-80-4	mg/kg	ND
4,4'-Thiodianiline	139-65-1	mg/kg	ND
o-Tolidine	95-53-4	mg/kg	ND
2,4-Diaminotoluene	95-80-7	mg/kg	ND
2,4,5-Trimethylaniline	137-17-7	mg/kg	ND
o-Anisidine	90-04-0	mg/kg	ND
4-Amino-azobenzene <sup>3</sup>	60-09-3	mg/kg	ND
2,4-Xylidine	95-68-1	mg/kg	ND
2,6-Xylidine	87-62-7	mg/kg	ND

**Remark:**

ND = not detected, less than 10 mg/kg (max.)

mg/kg = milligram per kilogram

Note 1 : o-Aminoazotoluene(CAS No.:97-56-3) is been reduced to o-Toluidine(CAS No.:95-53-4) and quantified by this.

Note 2 : 5-Nitro-o-toluidine(CAS No.:99-55-8) is been reduced to 4-Methyl-m-phenylene Diamine (CAS No.:95-80-7) and quantified by this.

Note 3 : 4-Amino-azobenzene(CAS No.:60-09-3) is detected as aniline. Need further confirmation when aniline is detected.

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

Standard	EN 14362-1:2012	Test item	Banned AZO Dyes
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Requirement : 30 mg/kg, for single material

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			4+5
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4,4'-Benzidine	92-87-5	mg/kg	ND
4-Chloro-2-methylaniline	95-69-2	mg/kg	ND
2-Naphthylamine	91-59-8	mg/kg	ND
o-Aminoazotoluene <sup>1</sup>	97-56-3	mg/kg	ND
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Bis-(4-aminophenyl)methane	101-77-9	mg/kg	ND
3,3'-Dichlorobenzidine	91-94-1	mg/kg	ND
3,3'-Dimethoxybenzidine	119-90-4	mg/kg	ND
3,3'-Dimethylbenzidine	119-93-7	mg/kg	ND
3,3'-Dimethyl-4,4'- diaminodiphenylmethane	838-88-0	mg/kg	ND
2-Methoxy-5-methylaniline	120-71-8	mg/kg	ND
4,4'-Methylene bis(o-chloroaniline)	101-14-4	mg/kg	ND
4,4'-Oxydianiline	101-80-4	mg/kg	ND
4,4'-Thiodianiline	139-65-1	mg/kg	ND
o-Tolidine	95-53-4	mg/kg	ND
2,4-Diaminotoluene	95-80-7	mg/kg	ND
2,4,5-Trimethylaniline	137-17-7	mg/kg	ND
o-Anisidine	90-04-0	mg/kg	ND
4-Amino-azobenzene <sup>3</sup>	60-09-3	mg/kg	ND
2,4-Xylidine	95-68-1	mg/kg	ND
2,6-Xylidine	87-62-7	mg/kg	ND

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Note 2 : 5-Nitro-o-toluidine(CAS No.:99-55-8) is been reduced to 4-Methyl-m-phenylene Diamine (CAS No.:95-80-7) and quantified by this.

Note 3 : 4-Amino-azobenzene(CAS No.:60-09-3) is detected as aniline. Need further confirmation when aniline is detected.

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

Standard	Reference to ISO/TS 1618	Test item	Dimethylfumarate (DMFu) Content
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Test Method : With reference to ISO/TS 16186: 2012(E), Analysis was performed by GC-MS.

Limit : According to client's requirement.

Tested Item(s)	Unit	Test Result				MDL	Limit
		1	4	5	6		
Dimethylfumarate (DMFu)	mg/kg	ND	ND	ND	ND	0.1	0.1

Note :

- 1) MDL = method detection limit.
- 2) ND = not detected, less than MDL.
- 3) mg/kg = milligram per kilogram

Standard	Reference to EPA 3550C	Test item	SCCP Content
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Test Method : With reference to EPA 3550C:2007, EPA 8270D:2007. Solvent extraction and quantification by GC-MS.

Limit : According to client's requirement.

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result			
					2	4	5	6
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	%	Not Detectable	0.005	ND	ND	ND	ND

Note :

- 1) MDL = method detection limit.
- 2) ND = not detected, less than MDL.

Standard	In House Method	Test item	Nonylphenol (NP) + Octylphenol (OP) Content
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Test Method : Extraction with organic solvent, analysis with GC-MS.

Limit : According to client's requirement.

Tested Item(s)	Unit	Test Result				MDL	Limit
		3	4	5	6		
Nonylphenol (NP)	mg/kg	ND	ND	ND	ND	2	2
Octylphenol (OP)	mg/kg	ND	ND	ND	ND	2	2

Note :

- 1) MDL = method detection limit.
- 2) ND = not detected, less than MDL.
- 3) mg/kg = milligram per kilogram



**A**



**B**



**C**