

Test Report No. SHAHG1728419303 Date: 29 Jan 2018 Page 1 of 9

HANGZHOU ANOW MICROFILTRATION CO., LTD QINGMING BRIDGE, XINDENG INDUSTRIAL ZONE, FUYANG DISTRICT ,HANGZHOU 311404,CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as: PP FILTER CARTRIDGE

SGS Job No.: SHHL1712074252SD - SH

Date of Sample Received: 26 Dec 2017

Testing Period: 26 Dec 2017 - 29 Jan 2018

Test Requested: Selected test(s) as requested by client.

Test Method: Please refer to next page(s).

Test Results: Please refer to next page(s).

Result Summary:

Test Requested	Conclusion
Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments -Overall migration	PASS
Council of Europe Resolution AP (2004) 5-Overall migration	PASS
Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments -Specific migration of heavy metal	PASS
Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004-Volatile organic matter (VOM)	PASS

Signed for and on behalf of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Serena Wang

Approved Signatory

Gerener Wanf



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t E&E (86-21) 61402553 f E&E (86-21) 64953679 t HL (86-21) 61402594 f HL (86-21) 61156899



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Test Results:

Test Part Description:

Specimen No.	SGS Sample ID	Description	Material
			(claimed by the client)
SN1	SHA17-284193.001	Translucent plastic plastic(Shell)	PP
SN2	SHA17-284193.002	White non-woven fabric(Middle)	PP
SN3	SHA17-284193.003	White non-woven fabric(Inner)	PP
SN4	SHA17-284193.004	Red silicone rubber ring	Silicone rubber
SN5	SHA17-284193.005	White non-woven fabric(Out)	PP

Remarks:

- (1) mg/dm² = milligram per square decimeter
- (2) mg/kg = milligram per kilogram
- (3) °C= degree Celsius
- (4) < = less than
- (5) MDL = Method Detection Limit
- (6) ND = Not Detected (< MDL)

Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments -Overall migration

Test Method: With reference to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III and

Annex V for selection of condition and EN 1186-1:2002 for selection of test methods;

For sample 001:

EN 1186-3: 2002 aqueous food simulants by total immersion method;

EN 1186-2: 2002 olive oil by total immersion method;

For sample 002~003, 005:

EN 1186-3: 2002 aqueous food simulants by total immersion method;

EN 1186-14: 2002 substitute test;

Simulant Used	<u>Time</u>	<u>Temperature</u>	Max. Permissible	Result of 001	Conclusion
			<u>Limit</u>	Overall migration	
3% Acetic acid (W/V) aqueous solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
20% Ethanol (V/V) Aqueous Solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
50% Ethanol (V/V) aqueous solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
Rectified olive oil	2.0hr(s)	70°C	10mg/dm ²	<3.0mg/dm²	PASS



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Simulant Used	<u>Time</u>	<u>Temperature</u>	Max. Permissible Limit	Result of 002 Overall migration	Conclusion
3% Acetic acid (W/V) aqueous solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
20% Ethanol (V/V) Aqueous Solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
50% Ethanol (V/V) aqueous solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
95% Ethanol	2.0hr(s)	60°C	10mg/dm²	<3.0mg/dm²	PASS
Isooctane	0.5hr(s)	40°C	10mg/dm²	<3.0mg/dm²	PASS
Simulant Used	<u>Time</u>	<u>Temperature</u>	Max. Permissible <u>Limit</u>	Result of 003 Overall migration	Conclusion
3% Acetic acid (W/V) aqueous solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
20% Ethanol (V/V) Aqueous Solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
50% Ethanol (V/V) aqueous solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
95% Ethanol	2.0hr(s)	60°C	10mg/dm²	<3.0mg/dm²	PASS
Isooctane	0.5hr(s)	40°C	10mg/dm²	<3.0mg/dm²	PASS
Simulant Used	<u>Time</u>	<u>Temperature</u>	Max. Permissible <u>Limit</u>	Result of 005 Overall migration	Conclusion
3% Acetic acid (W/V) aqueous solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
20% Ethanol (V/V) Aqueous Solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
50% Ethanol (V/V) aqueous solution	2.0hr(s)	70°C	10mg/dm²	<3.0mg/dm²	PASS
95% Ethanol	2.0hr(s)	60°C	10mg/dm²	<3.0mg/dm²	PASS
Isooctane	0.5hr(s)	40°C	10mg/dm²	<3.0mg/dm²	PASS

Notes:

- (1) Analytical tolerance of aqueous simulants is 2 mg/dm² or 12 mg/kg.
- (2) Analytical tolerance of fatty food simulants is 3 mg/dm² or 20mg/kg.
- (3) Test condition & simulant were specified by client.
- (4) The test data is obtained by considering the articles intended for repeated use as per described in Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex V. Report the 3rd extractive result.



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Council of Europe Resolution AP (2004) 5-Overall migration

Test Method: With reference to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III and

Annex V for selection of condition and EN 1186-1:2002 for selection of test methods;

EN 1186-3: 2002 agueous food simulants by total immersion method;

EN 1186-2: 2002 olive oil by total immersion method;

Simulant Used	<u>Time</u>	<u>Temperature</u>	Max. Permissible	Result of 004	Conclusion
			<u>Limit</u>	Overall Migration	
3% Acetic acid (W/V) aqueous solution	2.0hr(s)	70°C	60mg/kg	<20mg/kg	PASS
20% Ethanol (V/V) aqueous solution	2.0hr(s)	70°C	60mg/kg	<20mg/kg	PASS
50% Ethanol (V/V) aqueous solution	2.0hr(s)	70°C	60mg/kg	<20mg/kg	PASS
Rectified olive oil	2.0hr(s)	70°C	60mg/kg	<20mg/kg	PASS

Notes:

- (1) Analytical tolerance of aqueous simulants is 2 mg/dm² or 12 mg/kg.
- (2) Analytical tolerance of fatty food simulants is 3 mg/dm² or 20mg/kg.
- (3) Test condition & simulant were specified by client.
- (4) The test data is obtained by considering the articles intended for repeated use as per described in Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex V. Report the 3rd extractive result.

Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments -Specific migration of heavy metal

Test Method: With reference to EN13130-1:2004, analysis was performed by ICP-OES.

Sample 001

Simulant Used: 3% Acetic acid (W/V) aqueous solution

70 °C 2.0 hr(s) Test Condition:

Test Item(s)	Max. Permissible	<u>Unit</u>	<u>MDL</u>	Test result
	<u>Limit</u>			
Migration times	-	-	-	Third
Area/volume	-	dm²/kg	-	6.0
Aluminium(Al)	1	mg/kg	0.1	ND
Barium(Ba)	1	mg/kg	0.25	ND
Cobalt(Co)	0.05	mg/kg	0.01	ND
Copper(Cu)	5	mg/kg	0.25	ND



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Iron(Fe)	48	mg/kg	0.25	ND
Lithium(Li)	0.6	mg/kg	0.5	ND
Manganese(Mn)	0.6	mg/kg	0.25	ND
Zinc(Zn)	5	mg/kg	0.5	ND
Conclusion				PASS

Sample 002

Simulant Used: 3% Acetic acid (W/V) aqueous solution

Test Condition: 70 °C 2.0 hr(s)

Test Item(s)	Max. Permissible	<u>Unit</u>	<u>MDL</u>	Test result
	<u>Limit</u>			
Migration times	-	-	-	Third
Area/volume	-	dm²/kg	-	6.0
Aluminium(Al)	1	mg/kg	0.1	ND
Barium(Ba)	1	mg/kg	0.25	ND
Cobalt(Co)	0.05	mg/kg	0.01	ND
Copper(Cu)	5	mg/kg	0.25	ND
Iron(Fe)	48	mg/kg	0.25	ND
Lithium(Li)	0.6	mg/kg	0.5	ND
Manganese(Mn)	0.6	mg/kg	0.25	ND
Zinc(Zn)	5	mg/kg	0.5	ND
Conclusion				PASS

Sample 003

Simulant Used: 3% Acetic acid (W/V) aqueous solution

70 °C 2.0 hr(s) Test Condition:

Test Item(s)	Max. Permissible	<u>Unit</u>	<u>MDL</u>	Test result
	<u>Limit</u>			
Migration times	-	-	-	Third
Area/volume	-	dm²/kg	-	6.0
Aluminium(Al)	1	mg/kg	0.1	ND
Barium(Ba)	1	mg/kg	0.25	ND
Cobalt(Co)	0.05	mg/kg	0.01	ND
Copper(Cu)	5	mg/kg	0.25	ND
Iron(Fe)	48	mg/kg	0.25	ND
Lithium(Li)	0.6	mg/kg	0.5	ND
Manganese(Mn)	0.6	mg/kg	0.25	ND



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ND Zinc(Zn) 5 mg/kg 0.5

Conclusion **PASS**

Sample 005

Simulant Used: 3% Acetic acid (W/V) aqueous solution

70 °C 2.0 hr(s) Test Condition:

Test Item(s)	Max. Permissible	<u>Unit</u>	<u>MDL</u>	Test result
	<u>Limit</u>			
Migration times	-	-	-	Third
Area/volume	-	dm²/kg	-	6.0
Aluminium(Al)	1	mg/kg	0.1	ND
Barium(Ba)	1	mg/kg	0.25	ND
Cobalt(Co)	0.05	mg/kg	0.01	ND
Copper(Cu)	5	mg/kg	0.25	ND
Iron(Fe)	48	mg/kg	0.25	ND
Lithium(Li)	0.6	mg/kg	0.5	ND
Manganese(Mn)	0.6	mg/kg	0.25	ND
Zinc(Zn)	5	mg/kg	0.5	ND
Conclusion				PASS

Notes:

Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004-Volatile organic matter (VOM)

Test Method: With reference to EN 14372: 2004, Clause 6.3.3.

Test Item(s)	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>004</u>
Volatile Compounds Content	0.5	%	0.1	0.3
Conclusion				PASS

Remark:

(1) The test results are taken from report SHAHG1728419302.



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Sample photo:







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