

Test Report No.: 180248300a 001

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Client: ZHEJIANG UKPACK PACKAGING CO.,LTD
Contact Information: Tangjiazha village, Ditang Street Yuyao City, Zhejiang, China 315490
Buyer's name: n.a.
Manufacturer's name: NINGBO SUREDING PACKAGING CO.,LTD
Contact Information: 2-2 TONGJI ROAD,SIMEN TOWN,YUYAO,ZHEJIANG
Components of Syrup dispenser pump
**Identification/
Model No(s):** UKS10
Components of Sauce dispenser pump
UKS30, UKR30, UKM30, UKFND30
Sample Receiving date: 2022-12-08, 2022-12-14
Testing Period: 2022-12-08 to 2022-12-23
Delivery condition: Apparent good, Samples tested as received

Test specification:

Chemical tests performed for the suitability for contact with foodstuffs complied with the following regulations:

- U.S. FDA Code of Federal Regulations Title 21 (Food and Drugs)
- Release of Heavy Metals from Ceramic Ware / Glassware
- FDA GRAS Evaluation for Stainless Steel Material

Other Information:

Not available

Test conclusion:

PASS

For detailed sample picture please refer to last page

For and on behalf of TÜV Rheinland / CCIC (Ningbo)Co., Ltd.



2023-01-06

Date

Chris W. W. Wang / Assistant Manager

Name / Position

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.

This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

'Decision Rule' document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.

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Indication: Food contact
Product: Commodity, contact with foodstuff

Description of test specimen

Item

1 Syrup dispenser pump
Sauce dispenser pump

1. Material List:

Sample No.	Material	Color	Location
1	PE	Semi-transparent	Refer to photo
2	PE	Beige	Refer to photo
3	PP	Semi-transparent	Refer to photo
4	PP	White	Refer to photo
5	PP	Black	Refer to photo
6	PP	Blue	Refer to photo
7	PP	Golden	Refer to photo
8	PP	Dark blue	Refer to photo
10	SUS 304	Silver	Refer to photo
11	Glass	Transparent	Refer to photo

Remark:

According to client's information all items are produced of same material. Tests were performed on randomly selected items.

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2. Overall Results:

Test No.	Tested Item	Conclusion
1	Extractive Substances for Olefin Polymers	PASS
2	Release of Heavy Metals from Ceramic Ware / Glassware	PASS
3	GRAS Evaluation for Stainless Steel Materials	PASS

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3. Results

3.1 Extractive Substances for Olefin Polymers

Test method: With reference to FDA 21 CFR 177.1520(d):

Limit: FDA 21 CFR 177.1520(c)

The following simulating solvents and test conditions were stipulated:

Food simulant	Test duration / Temperature
n-Hexane	2 hour(s) / 50 °C
Xylene	2 hour(s) / boiling under reflux

Test No.:	1		
Sample No.:	1		
Parameter	Unit	Result	Limit
n-Hexane	%	< 2	5.5
Xylene	%	7.9	11.3

Test No.:	2		
Sample No.:	2		
Parameter	Unit	Result	Limit
n-Hexane	%	< 2	5.5
Xylene	%	1.4	11.3

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Food simulant	Test duration / Temperature
n-Hexane	2 hour(s) / boiling under reflux
Xylene	2 hour(s) / boiling under reflux

Test No.:	3		
Sample No.:	3		
Parameter	Unit	Result	Limit
n-Hexane	%	< 2	6.4
Xylene	%	7.3	9.8

Test No.:	4		
Sample No.:	4		
Parameter	Unit	Result	Limit
n-Hexane	%	< 2	6.4
Xylene	%	4.8	9.8

Test No.:	5		
Sample No.:	5		
Parameter	Unit	Result	Limit
n-Hexane	%	2.1	6.4
Xylene	%	6.5	9.8

Test No.:	6		
Sample No.:	6		
Parameter	Unit	Result	Limit
n-Hexane	%	< 2	6.4
Xylene	%	9.2	9.8

Test No.:	7		
Sample No.:	7		
Parameter	Unit	Result	Limit
n-Hexane	%	< 2	6.4
Xylene	%	4.0	9.8

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Test No.:	8		
Sample No.:	8		
Parameter	Unit	Result	Limit
n-Hexane	%	< 2	6.4
Xylene	%	8.3	9.8

Abbreviations:

% = Percentage

< = Less than

Remark:

- *1 According to FDA 21 CFR 177.1520(c), articles in contact with food should not exceed the following limits:

Category*	Unit	Description	Maximum extractable fraction in	
			n-Hexane	Xylene
1.	%	Polypropylene	6.4	9.8
2.	1.	Polyethylene for use in articles that contact food except for articles used for packing or holding food during cooking	5.5	11.3
	2.	Polyethylene for use in articles used for packing or holding food during cooking	2.6	11.3
3.1.a	%	Olefin copolymers with two or more of the 1-alkenes having 2 to 8 carbon atoms for use in articles that contact food except for articles used for packing or holding food during cooking	5.5	30

* Most common categories acc. to FDA 21 CFR 177.1520(c) are displayed.

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3.2 Release of Heavy Metals from Ceramic Ware / Glassware

Test method: The test was performed according to ASTM C 738-94(2016)

Limit: FDA CPG Sec. 545.400 and 450

The following food simulant and condition was applied:

Food simulant	Test duration / Temperature
Acetic acid 4 %	24 hour(s) / 22 °C

Test No.:	1		
Category:	Flatware		
Sample No.:	11		
Trial	Unit	Lead (Pb)	Cadmium (Cd)
Trial 1	µg/ml	< 0.2	< 0.02
Trial 2	µg/ml	< 0.2	< 0.02
Trial 3	µg/ml	< 0.2	< 0.02
Trial 4	µg/ml	< 0.2	< 0.02
Trial 5	µg/ml	< 0.2	< 0.02
Trial 6	µg/ml	< 0.2	< 0.02
Average	µg/ml	< 0.2	< 0.02

Abbreviations:

µg/ml = Microgram per Millilitre

< = Less than

Remarks:

*1 Permissible limits of Cadmium and Lead leached from Ceramic ware acc. to FDA CPG Sec. 545.400 and 450

Category	Description	Unit	Cadmium	Lead
Flatware	average of 6 units	µg/ml	0.5	3.0
Small hollowware	any 1 of 6 units	µg/ml	0.5	2.0
Large hollowware	any 1 of 6 units	µg/ml	0.25	1.0
Cups and Mugs	any 1 of 6 units	µg/ml	--	0.5
Pitchers, jug	any 1 of 6 units	µg/ml	--	0.5

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3.3 GRAS Evaluation for Stainless Steel Materials^(#)

Test method: Carbon and Sulphur: Refer to ISO 15350
Other elements: Acid digestion, analysed by ICP-OES

Limit: The material shall meet the specification of claimed stainless steel type. Stainless Steel is considered as a Generally Recognized As Safe (GRAS) material under FDA.

Test No.:	1		
Material No.:	10		
Parameter	Unit	RL	Result
Chromium (Cr)	%	0.1	18.5
Nickel (Ni)	%	0.1	8.2
Carbon (C)	%	0.01	0.07
Silicon (Si)	%	0.1	0.3
Manganese (Mn)	%	0.1	1.0
Phosphorous (P)	%	0.005	0.036
Sulfur (S)	%	0.01	< RL
Molybdenum (Mo)	%	0.1	< RL

Abbreviations:

- % = Percentage
- RL = Reporting Limit
- < = Less than

Remark:

- *1 The material composition meets the requirements of the claimed stainless steel type. The material can be considered as Generally Recognized As Safe (GRAS) under FDA specifications.

(#)- Test sub-contracted to a laboratory which complies with the requirement of ISO/IEC 17025:2017.

4. Sample picture(s):



Sample 1



Above samples which are by client's declaration made of same material as tested Sample 1.



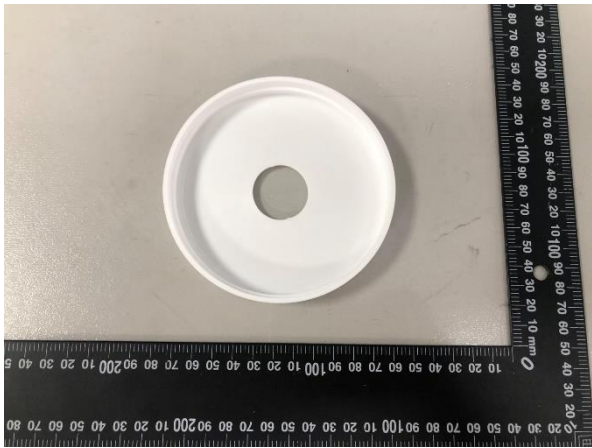
Sample 2



Sample 3



Above samples which are by client's declaration made of same material as tested Sample 3.



Sample 4



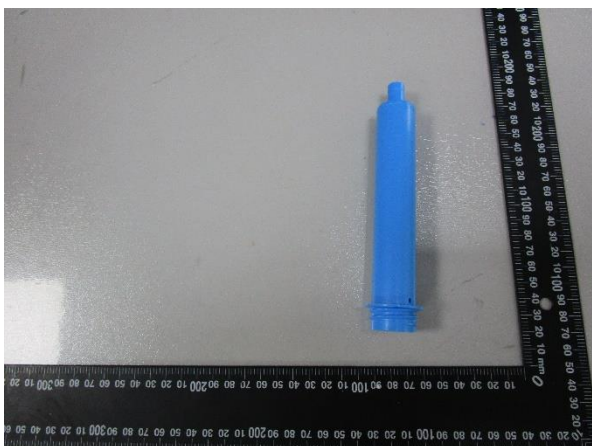
Above samples which are by client's declaration made of same material as tested Sample 4.



Sample 5



Above samples which are by client's declaration made of same material as tested Sample 5.



Sample 6



Above samples which are by client's declaration made of same material as tested Sample 6.



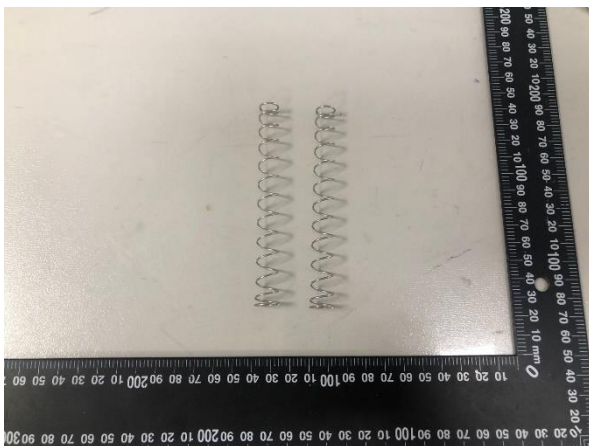
Sample 7



Above samples which are by client's declaration made of same material as tested Sample 7.



Sample 8



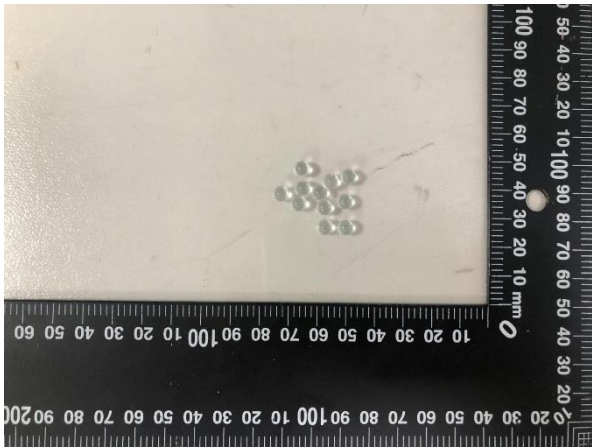
Sample 10



Above samples which are by client's declaration made of same material as tested Sample 10.

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Sample 11



UKS10



UKS30



UKR30



UKM30



UKFND30

- END -

