Test Report

Applicant	: Shandong Jirun Environmental Protection Technology Co., Ltd.
Address	: Yinlong Industrial Park, Zhangjiawa Subdistrict Office, Laiwu District, Jinan City, Shandong Province

Report on the submitted sample(s) said to be:

Sample(s) Name	: Biodegradable sugarcane pulp disposable tableware
Model	: 313, 314, 315, 24, 25, 26, 500, 500X, 12, 702, 878, ST-1400, ST-1100, ST-4C, ST-5C, 3-Compartment, 4-Compartment, 5-Compartment, 5-Compartment with Dots, 6-Compartment, 700-Size Double-Compartment, 750-Size Hexagonal Bowl, 1100-Size Hexagonal Bowl, Square Compartment, Meat Tray No.1, Meat Tray No.2, Meat Tray No.3, Meat Tray No.4, Sushi Box No.03, Sushi Box No.05, Sushi Box No.07, Sushi Box No.09
Manufacturer	: Shandong Jirun Environmental Protection Technology Co., Ltd.
Address	: Yinlong Industrial Park, Zhangjiawa Subdistrict Office, Laiwu District, Jinan City, Shandong Province
Country of Origin	: China
Country of Destination	: United States, European Union, Germany, Middle East, France
Sample(s) received date	: Oct 31, 2025
Testing period	: From Oct 31, 2025 to Nov 07, 2025

Test Requested

As requested by the applicant, refer to attached page(s) for details.

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To be continued

Approved by: Ben Miao

Technical Manager

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Shenzhen General Standard Testing Services Co.,Ltd
2/F&3/F-5/F East Wing,Building C10,Zhu'ao 2nd industrial zone,Xixiang Street,Bao'an District, Shenzhen, Guangdong, China
Tel: 86-0755-36307999 Website: www.gst-lab.com E-mail: info@gst-lab.com

Test Report

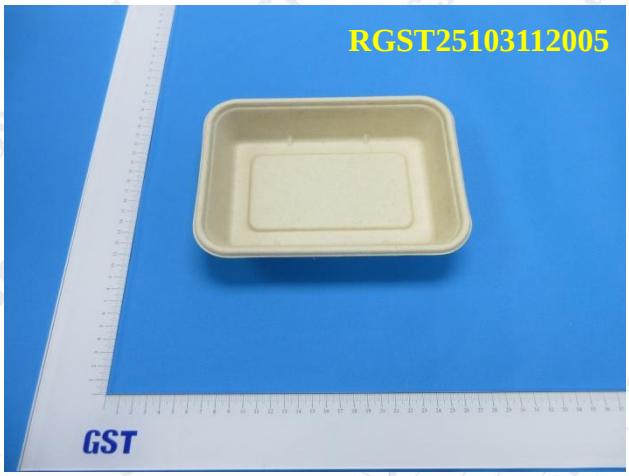
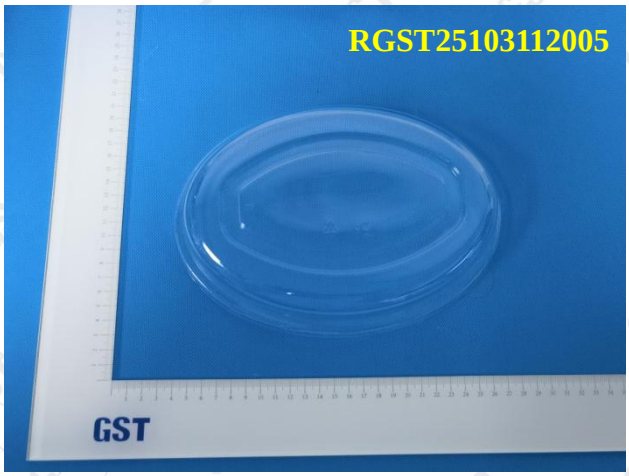
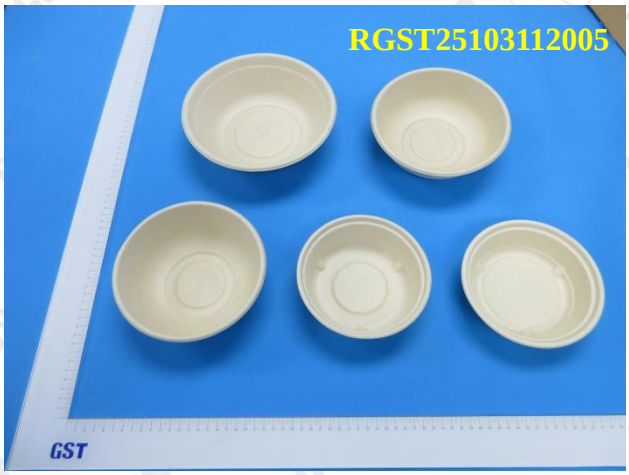
	Test Standard	Conclusion
1	German Food, Articles of Daily Use and Feed Code of September 1 ,2005(LFGB), Section30&31 with amendments -Sensory Test.	Pass
2	German Food, Articles of Daily Use and Feed Code of September 1 ,2005(LFGB), Section30&31 with amendments and BfR recommendation and European Commission Regulation (EC) No 1935/2004 and Regulation (EU) No 10/2011 and its amendments-Overall Migration.	Pass
3	German Food, Articles of Daily Use and Feed Code of September 1 ,2005(LFGB), Section30&31 with amendments and BfR recommendation and European Commission Regulation (EC) No 1935/2004 and Regulation (EU) No 10/2011 and its amendments (EU) 2020/1245- Specific Migration of Heavy Metals.	Pass
4	German Food, Articles of Daily Use and Feed Code of September 1 ,2005(LFGB), Section30&31 with amendments and BfR recommendation- PAHs content.	Pass
5	German Food, Articles of Daily Use and Feed Code of September 1 ,2005(LFGB), Section 30&31 with amendments and BfR Recommendation- Colour Release.	Pass
6	European Commission Regulation (EC) No 1935/2004 and Regulation AP(2004)2 on Cork stoppers and other cork materials and articles come into contact with foodstuffs - Pentachlorophenol(PCP) content.	Pass
7	European Commission Regulation (EC) No 1935/2004 and Regulation AP(2004)2 on Cork stoppers and other cork materials and articles come into contact with foodstuffs - Specific migration of Formaldehyde.	Pass
8	EN 17681-1: 2025- Perfluoroalkyl and polyfluoroalkyl substances (PFAS) content.	Pass
9	Client's Requirement - Perfluoroalkyl and polyfluoroalkyl substances (PFAS) content.	Pass
10	Item 68 of Annex XVII of REACH Regulation (EC) 1907/2006- C9-C14 perfluorocarboxylic acids (PFCAs) of PFAS, their salts and related substances content.	Pass
11	Item 79 of Annex XVII of REACH Regulation (EC) 1907/2006& amendment (EU) 2024/2462- Perfluorohexane Acid (PFHxA) their salts and related substances content.	Pass
12	Persistent Organic Pollutants (POPs) Regulation (EU) 2019/1021- Perfluorooctane sulfonates(PFOS)and its derivatives content.	Pass
13	Persistent Organic Pollutants (POPs) Regulation (EU) 2019/1021 and its amendment Directive (EU) 2020/784- Perfluorooctanoic Acid and its salts (PFOAs) and PFOA related compounds content.	Pass
14	Persistent Organic Pollutants (POPs) Regulation (EU) 2019/1021 and its amendment Directive (EU) 2023/1608- Perfluorohexane sulfonic Acid (PFHxS) and its salts and PFHxS related compounds content.	Pass

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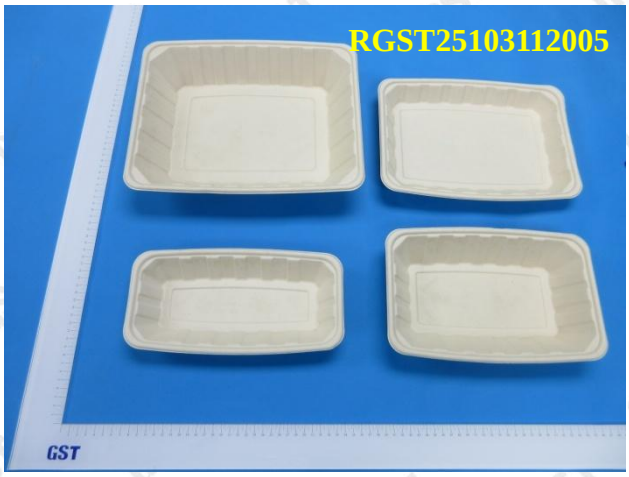
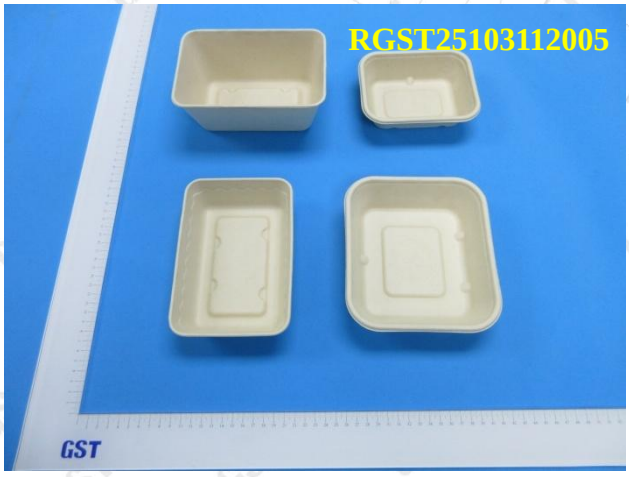
Test Report

Photograph(s) of Sample

	
Test sample	Test sample
	
Display sample	Display sample

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Test Report

	
Display sample	Display sample
	
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Test Report

	
Display sample	Display sample
	
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Test Report



Display sample

GST authenticate the photo on original report only

Specimen Description:

No.	Test part(s) name
1	Yellow wood plate (Material: Wood)
2	Transparent plastic lid (Material: PET)

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Results:

(1) Sensory Test (Odour and Taste) - German Food, Articles of Daily Use and Feed Code of September 1 ,2005(LFGB), Section30&31 with amendments

Test Method: With reference to DIN 10955:2023

Parameter	Food Simulant	Maximum Permissible Limit	Result(s)
			2
Odour transfer into foodstuff through simulant	0	2.5 Scale	0
Taste transfer into foodstuff through simulant	0		0

Scale: 0 = no perceptible off-odour(or taste transfer);
1 = off-odour(or taste transfer) just perceptible(but still difficult to define);
2 = slight off-odour(or taste transfer);
3 = distinct off-odour(or taste transfer);
4 = strong off-(or taste transfer)

(2) Overall Migration- German Food, Articles of Daily Use and Feed Code of September 1 ,2005(LFGB), Section30&31 with amendments and BfR recommendation and European Commission Regulation (EC) No 1935/2004 and Regulation (EU) No 10/2011 and its amendments

Test Method: With reference to EN 1186-1:2002 & & EN 1186-3:2022

Test condition: 3% (w/v)acetic acid, 40℃, 0.5h

Simulant Used	Unit	MDL	Maximum Permissible Limit	Result(s)
				2
3% (w/v)acetic acid in aqueous solution	mg/dm^2	3	10	N.D.

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(3) Specific Migration of Heavy Metal- German Food, Articles of Daily Use and Feed Code of September 1 ,2005(LFGB), Section30&31 with amendments and BfR recommendation and European Commission Regulation (EC) No 1935/2004 and Regulation (EU) No 10/2011 and its amendments (EU) 2020/1245.

Test Method: With reference to EN 13130-1:2004& EN ISO 11885:2009

Test condition: 3%(w/v) acetic acid in aqueous solution,40℃, 0.5h

Test Instrument: Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

Test item(s)	Unit	MDL	Maximum Permissible Limit	Result(s)
				2
Aluminium (Al)	mg/kg	0.1	1	N.D.
Barium (Ba)	mg/kg	0.1	1	N.D.
Cobalt (Co)	mg/kg	0.01	0.05	N.D.
Copper (Cu)	mg/kg	0.1	5	N.D.
Iron (Fe)	mg/kg	1	48	N.D.
Lithium (Li)	mg/kg	0.1	0.6	N.D.
Manganese (Mn)	mg/kg	0.1	0.6	N.D.
Nickel (Ni)	mg/kg	0.01	0.02	N.D.
Zinc (Zn)	mg/kg	1	5	N.D.
Antimony(Sb)	mg/kg	0.01	0.04	N.D.
Lead (Pb)	mg/kg	0.001	0.01	N.D.
Cadmium (Cd)	mg/kg	0.001	0.002	N.D.
Arsenic (As)	mg/kg	0.01	0.01	N.D.
Mercury (Hg)	mg/kg	0.001	0.01	N.D.
Chromium (Cr)	mg/kg	0.01	0.01	N.D.
Europium(Eu)	mg/kg	0.01	/	N.D.
Gadolinium(Gd)	mg/kg	0.01	/	N.D.
Lanthanum(La)	mg/kg	0.01	/	N.D.
Terbium(Tb)	mg/kg	0.01	/	N.D.
Sum of (Europium+ Gadolinium+ Lanthanum+ Terbium)	mg/kg	/	0.05	N.D.

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(4) PAHs content- German Food, Articles of Daily Use and Feed Code of September 1 ,2005(LFGB), Section30&31 with amendments and BfR recommendation

Test Method: With reference to AfPS-GS-2019-01: PAK

Test Instrument: Gas Chromatography-Mass Spectrometer (GC-MS)

No.	Test item(s)	Unit	MDL	Limit	Result(s)
					2
1	Naphthalene*	mg/kg	0.1	1	N.D.
2	Phenanthrene	mg/kg	0.1	/	N.D.
3	Anthracene	mg/kg	0.1	/	N.D.
4	Fluoranthene	mg/kg	0.1	/	N.D.
5	Pyrene	mg/kg	0.1	/	N.D.
6	Benzo (a)anthracene	mg/kg	0.1	0.2	N.D.
7	Chrysene	mg/kg	0.1	0.2	N.D.
8	Benzo (b) fluoranthene	mg/kg	0.1	0.2	N.D.
9	Benzo (k) fluoranthene	mg/kg	0.1	0.2	N.D.
10	Benzo (j) fluoranthene	mg/kg	0.1	0.2	N.D.
11	Benzo (e) pyrene	mg/kg	0.1	0.2	N.D.
12	Benzo (a) pyrene	mg/kg	0.1	0.2	N.D.
13	Indeno (1,2,3-cd) pyrene	mg/kg	0.1	0.2	N.D.
14	Dibenzo (a,h) anthracene	mg/kg	0.1	0.2	N.D.
15	Benzo (g,h,i) perylene	mg/kg	0.1	0.2	N.D.
Sum of phenanthrene, pyrene, anthracene, fluoranthene		mg/kg	/	1	N.D.
Total PAHs		mg/kg	/	1	N.D.

- *Based on its relative volatility against the other 14 PAH (according to EPA), naphthalene represents a parameter difficult to evaluate in close to skin products. Experience of the testing bodies show that loss of naphthalene as well as secondary contamination can be found. The developed naphthalene result will always only show the momentary situation of the test sample at the time of measurement.

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(5) Colour Release-German Food, Articles of Daily Use and Feed Code of September 1 ,2005(LFGB), Section 30&31 with amendments and BfR Recommendation

Test Method: With reference to Kunststoffe im Lebensmittelverkehr, Part B II IX

Test item(s)	Time	Temperature	Maximum Permissible Limit	Results
				2
Colour Release in 3%(w/v) acetic acid in aqueous solution	0.5h	40℃	Absent	Absent

(6) Pentachlorophenol(PCP) content- European Commission Regulation (EC) No 1935/2004 and Regulation AP(2004)2 on Cork stoppers and other cork materials and articles come into contact with foodstuffs.

Test Method: With reference to ISO 15320: 2011

Test Instrument: Gas Chromatography-Mass Spectrometer (GC-MS)

Test item(s)	Unit	MDL	Maximum Permissible Limit	Result(s)
				1
Pentachlorophenol(PCP)	mg/kg	0.1	0.15	N.D.

(7) Specific migration of Formaldehyde- European Commission Regulation (EC) No 1935/2004 and Regulation AP(2004)2 on Cork stoppers and other cork materials and articles come into contact with foodstuffs.

Test Method: With reference to EN 13130-1:2004&DD CEN TS 13130-23:2005

Test condition: 3%(w/v) acetic acid in aqueous solution, 40℃, 0.5h

Test instrument: Ultraviolet and Visible Spectrophotometer(UV-Vis)

Test item(s)	Unit	MDL	Maximum Permissible Limit	Result(s)
				1
Specific migration of Formaldehyde	mg/kg	0.1	15	N.D.

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(8) Perfluoroalkyl and polyfluoroalkyl substances (PFAS) content.

Test Method: With reference to EN 17681-1: 2025

Test Instrument: Liquid Chromatography-Mass Spectrometer- Mass Spectrometer (LC-MS-MS)

Test Item(s)		CAS No.	MDL (μg/kg)	Client Limit	Result(s)
					2
C4-C5 Perfluoro carboxylic acids					
1	Perfluoro-n-butanoic acid (PFBA)	375-22-4	10	Not Detected	N.D.
2	Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	10	Not Detected	N.D.
C4-C5 Perfluoro carboxylic acids related substances					
3	4:2 Fluorotelomer alcohol (4:2 FTOH)	2043-47-2	400	Not Detected	N.D.
Perfluoro hexanoic acid and salts					
4	Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	10	Not Detected	N.D.
4.1	Perfluoro-n-hexanoic acid salts -Ammonium perfluoro-n-hexanoate (APFHx)	21615-47-4	10	Not Detected	N.D.
Perfluoro hexanoic acid related substances					
5	6:2 Fluorotelomer alcohol (6:2 FTOH)	647-42-7	100	Not Detected	N.D.
6	6:2 Fluorotelomer acrylate (6:2 FTA)	17527-29-6	100	Not Detected	N.D.
7	6:2 Fluorotelomer methacrylate (6:2 FTMA)	2144-53-8	100	Not Detected	N.D.
8	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10	Not Detected	N.D.
Perfluoro heptanoicacids					
9	Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	10	Not Detected	N.D.
10	7H-Dodecafluoroheptanoic acid (7HPFHpA)	1546-95-8	100	Not Detected	N.D.
Perfluoro octanoic acid and salts					
11	Perfluoro-n-octanoic acid (PFOA)	335-67-1	10	Not Detected	N.D.
11.1	Perfluoro-n-octanoic acid salts -Ammonium perfluoro-n-octanoate -Sodium perfluoro-n-octanoate -Potassium perfluoro-n-octanoate	3825-26-1 335-95-5 2395-00-8 335-93-3	10	Not Detected	N.D.

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Test Item(s)		CAS No.	MDL (μg/kg)	Client Limit	Result(s)
					2
	-Silver perfluoro-n-octanoate (APFO/Na-PFO/K-PFO/Ag-PFO)				
Perfluoro octanoic acid related substances					
12	Perfluoro-n-octanoyl fluoride (F-PFO)	335-60-0	10	Not Detected	N.D.
13	Methyl perfluoro-n-octanoate (Me-PFOA)	376-27-2	100	Not Detected	N.D.
14	Ethyl perfluoro-n-octanoate (Et-PFOA)	3108-24-5	100	Not Detected	N.D.
15	8:2 Fluorotelomer alcohol (8:2 FTOH)	678-39-7	100	Not Detected	N.D.
16	8:2 Fluorotelomer acrylate (8:2 FTA)	27905-45-9	100	Not Detected	N.D.
17	8:2 Fluorotelomer methacrylate (8:2 FTMA)	1996-88-9	100	Not Detected	N.D.
18	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	10	Not Detected	N.D.
C9-C14 Perfluoro carboxylic acids and salts					
19	Perfluoro-n-nonanoic acid (PFNA)	375-95-1	10	Not Detected	N.D.
19.1	Perfluoro-n-nonanoic acid salts -Sodium perfluoro-n-nonanoate (Na-PFN)	21049-39-8	15	Not Detected	N.D.
20	Perfluoro-n-decanoic acid (PFDA)	335-76-2	15	Not Detected	N.D.
20.1	Perfluoro-n-decanoic acid salts -Ammonium perfluoro-n- decanoate -Sodium perfluoro-n-decanoate(NH4-PFD/Na-PFD)	3108-42-7 3830-45-3	15	Not Detected	N.D.
21	Perfluoro-n-undecanoic acid (PFUnA)	2058-94-8	15	Not Detected	N.D.
22	Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	15	Not Detected	N.D.
23	Perfluoro-n-tridecanoic acid (PFTrA)	72629-94-8	15	Not Detected	N.D.
24	Perfluoro-n-tetradecanoic acid (PFTeA)	376-06-7	15	Not Detected	N.D.
25	Perfluoro (3,7-dimethyloctanoic acid) (PF-3,7DMOA)	172155-07-6	15	Not Detected	N.D.
C9-C14 Perfluoro carboxylic acids related substances					

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Test Item(s)		CAS No.	MDL (μg/kg)	Client Limit	Result(s)
					2
26	2H,2H,3H,3H-Perfluoro-n-undecanoic acid (4HPFUnA)	34598-33-9	10	Not Detected	N.D.
27	10:2 Fluorotelomer sulfonic acid (10:2 FTOH)	865-86-1	100	Not Detected	N.D.
28	10:2 Fluorotelomer acrylate (10:2 FTA)	17741-60-5	100	Not Detected	N.D.
29	10:2 Fluorotelomer methacrylate(10:2 FTMA)	2144-54-9	10	Not Detected	N.D.
30	10:2 Fluorotelomer sulfonic acid (10:2FTS)	120226-60-0	10	Not Detected	N.D.
Perfluoro octane sulfonic acid and its salts					
31	Perfluoro-n-octane sulfonic acid (PFOS)	1763-23-1	10	Not Detected	N.D.
31.1	Perfluoro-n-octane sulfonic acid salts $C_8F_{17}S0_2X$ -Potassium perfluoro-n-octane sulfonate -Lithium perfluoro-n-octane sulfonate -Ammonium perfluoro-n-octane sulfonate -Bis(2-hydroxyethyl)ammonium perfluoro-n-octane sulfonate -Tetraethyl ammonium perfluoro-n-octane sulfonate -Didecyl(dimethyl) azaniun perfluoro-n-octane sulfonate (PFOS-X)	2795-39-3 29457-72-5 29081-56-9 70225-14-8 56773-42-3 251099-16-8	10	Not Detected	N.D.
Perfluoro octane sulfonic acid derivates					
32	Perfluoro-1octanesulfonamide (PFOSA)	754-91-6	10	Not Detected	N.D.
33	N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8	10	Not Detected	N.D.
34	N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2	10	Not Detected	N.D.
35	2-(N-methylperfluoro-1-octanesulfonamideo)-ethanol (N-MeFOSE)	24448-09-7	10	Not Detected	N.D.
36	2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	1691-99-2	10	Not Detected	N.D.
37	Perfluoro-1-octanesulfonyl fluoride (PFOSF)	307-35-7	10	Not Detected	N.D.

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Test Item(s)		CAS No.	MDL (μg/kg)	Client Limit	Result(s)
					2
Perfluoro sulfonic acids and its saltsb					
38	Perfluorobutanesulfonic acid (PFBS)	375-73-5	10	Not Detected	N.D.
39	Perfluoro-n-hexanesulfonic acid (PFHxS)	355-46-4	10	Not Detected	N.D.
40	Perfluoro-n-heptanesulfonic acid (PFHpS)	375-92-8	10	Not Detected	N.D.
41	Perfluoro-n-decanesulfonic acid (PFDS)	335-77-3	10	Not Detected	N.D.
42	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	10	Not Detected	N.D.
Perfluoro-2-propoxypropanoic acid its salts and derivatives					
43	Perfluoro-2propoxypropanoic acid (HFPO-DA)	13252-13-6	10	Not Detected	N.D.
43.1	Perfluoro-2-propoxypropanoic acid salts and acyl halides X=F X=NH X=K (HFPO-DA-X)	2062-98-8 62037-80-3 67118-55-2	10	Not Detected	N.D.

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(9) Perfluoroalkyl and polyfluoroalkyl substances (PFAS) content.

Test Method: In-house method

Test Instrument: Liquid Chromatography-Mass Spectrometer- Mass Spectrometer (LC-MS-MS)

Test Item(s)		CAS No.	MDL (mg/kg)	Client Limit	Result(s)
					2
1	Perfluoro-n-decanesulfonic acid (PFDS)	335-77-3	0.01	Not Detected	N.D.
2	Perfluoro-2propoxypropanoic acid (HFPO-DA)	13252-13-6	0.01	Not Detected	N.D.
3	7H-Dodecafluoroheptanoic acid (7HPFHpA)	1546-95-8	0.01	Not Detected	N.D.
4	4:2 Fluorotelomer alcohol (4:2 FTOH)	2043-47-2	0.01	Not Detected	N.D.
5	Sodium4,8-dioxa-3H-perfluorononanoate (ADONA-Na)	2250081-67-3	0.01	Not Detected	N.D.
6	Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	0.01	Not Detected	N.D.
7	Perfluoro-n-butanoic acid (PFBA)	375-22-4	0.01	Not Detected	N.D.
8	Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.01	Not Detected	N.D.
9	Perfluoro-n-heptanesulfonic acid (PFHpS)	375-92-8	0.01	Not Detected	N.D.
10	1H,1H-Perfluorooctylamine (7:1 $FTNH_2$)	307-29-9	0.01	Not Detected	N.D.
11	Perfluorooctyl phosphoic acid (PFOPA)	40143-78-0	0.01	Not Detected	N.D.
12	1-Octanol,3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-,1,1'-(hydrogenphosphate)(6:2diPAP)	57677-95-9	0.01	Not Detected	N.D.
13	Bis(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) hydrogen phosphate(8:2diPAP)	678-41-1	0.01	Not Detected	N.D.
14	2H-Perfluoro-2-decenoic acid (8:2 FTUCA)	70887-84-2	0.01	Not Detected	N.D.
15	Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (9Cl-PF_3ONS-K)	73606-19-6	0.01	Not Detected	N.D.
16	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.01	Not Detected	N.D.
17	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF_3OUdS)	763051-92-9	0.01	Not Detected	N.D.
18	8:2 Fluorotelomer phosphate monoester (8:2 monoPAP)	57678-03-2	0.01	Not Detected	N.D.
19	Perfluoro-3,7-dimethyloctanoic acid (PF-3,7DMOA)	172155-07-6	0.01	Not Detected	N.D.

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Test Item(s)		CAS No.	MDL (mg/kg)	Client Limit	Result(s)
					2
20	Perfluoro-n-undecanoic acid (PFUnA)	2058-94-8	0.01	Not Detected	N.D.
21	Perfluorododecanoic acid (PFDoDA)	307-55-1	0.01	Not Detected	N.D.
22	Perfluoro-n-decanoic acid (PFDA)	335-76-2	0.01	Not Detected	N.D.
23	Perfluorononanoic acid (PFNA)	375-95-1	0.01	Not Detected	N.D.
24	Perfluoro-n-tetradecanoic acid (PFTeA)	376-06-7	0.01	Not Detected	N.D.
25	Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.01	Not Detected	N.D.
26	1H,1H,2H,2H-Perfluorododecane sulfonic acid(10:2 FTS)	120226-60-0	0.01	Not Detected	N.D.
27	2H,2H,3H,3H-Perfluoroundecanoic acid(H_4PFUnDA/ 8:3 FTCA)	34598-33-9	0.01	Not Detected	N.D.
28	10:2 Fluorotelomer sulfonic acid (10:2 FTOH)	865-86-1	0.01	Not Detected	N.D.
29	Perfluorohexane Acid (PFHxA)	307-24-4	0.01	Not Detected	N.D.
30	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.01	Not Detected	N.D.
31	Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	0.01	Not Detected	N.D.
32	6:2 Fluorotelomer alcohol (6:2 FTOH)	647-42-7	0.01	Not Detected	N.D.
33	Perfluoro-n-hexanesulfonic acid (PFHxS)	355-46-4	0.01	Not Detected	N.D.
34	Pentadecafluorooctylfluoride(PFOA-F)	335-66-0	0.01	Not Detected	N.D.
35	2H,2H-Perfluorodecane Acid(H_2PFDA/8:2FTCA)	27854-31-5	0.01	Not Detected	N.D.
36	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4	0.01	Not Detected	N.D.
37	8:2 Fluorotelomer alcohol (8:2 FTOH)	678-39-7	0.01	Not Detected	N.D.
38	Perfluoro-n-octane sulfonic acid (PFOS)	1763-23-1	0.01	Not Detected	N.D.
39	N-Decyl-N,N-dimethyl-1-decanaminiumperfluorooctanesulfonate(PFOS-DDA)	251099-16-8	0.01	Not Detected	N.D.
40	2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	1691-99-2	0.01	Not Detected	N.D.
41	2-(N-methylperfluoro-1-octanesulfonamido)ethanol(N-MeFOSE)	24448-09-7	0.01	Not Detected	N.D.

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Test Item(s)		CAS No.	MDL (mg/kg)	Client Limit	Result(s)
					2
42	Perfluoro-1-octanesulfonyl fluoride (PFOSF)	307-35-7	0.01	Not Detected	N.D.
43	N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8	0.01	Not Detected	N.D.
44	N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2	0.01	Not Detected	N.D.
45	Perfluorooctane Sulfonamide (PFOSA)	754-91-6	0.01	Not Detected	N.D.

(10) C9-C14 perfluorocarboxylic acids (PFCAs), their salts and related substances content - Item 68 of Annex XVII of REACH Regulation (EC) 1907/2006.

Test Method: In-house method

Test Instrument: Liquid Chromatographic-Mass Spectrometric (LC-MS)

Test item(s)	Unit	MDL	Limit	Result(s)
				2
C9-C14 PFCAs and their salts	ppb	1	25	N.D.
C9-C14 PFCAs-related substances	ppb	10	260	N.D.

Test List of C9-C14 perfluorocarboxylic acids (PFCAs), their salts and related substances		
No.	Chemical name	CAS No.
1	Perfluorononanoic acid (PFNA)	375-95-1
2	Perfluorodecanoic acid (PFDA)	335-76-2
3	Perfluoroundecanoic acid (PFUndA)	2058-94-8
4	Perfluorododecanoic acid (PFDoDA)	307-55-1
5	Perfluorotridecanoic acid (PFTrDA)	72629-94-8
6	Perfluorotetradecanoic acid (PFTDA)	376-06-7
7	Perfluoro-3,7-dimethyloctanoic acid (PF-3,7DMOA)	172155-07-6
8	Perfluorodecane sulfonic acid (PFDS)	335-77-3
9	1H,1H,2H,2H-Perfluoro-1-dodecanol(10:2FTOH)	865-86-1
10	1H,1H,2H,2H-Perfluorododecylacrylate(10:2FTA)	17741-60-5
11	1H,1H,2H,2H-Perfluorododecyl methacrylate(10:2 FTMA)	2144-54-9

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Test List of C9-C14 perfluorocarboxylic acids (PFCAs), their salts and related substances		
No.	Chemical name	CAS No.
12	1H,1H,2H,2H-perfluorotetradecan-1-ol(12:2FTOH)	39239-77-5
13	1H,1H,2H,2H-Perfluorododecane sulfonic acid(10:2 FTS)	120226-60-0
14	1,1,2,2-Tetrahydroperfluorododecyl iodide(10:2FTI)	2043-54-1
15	1H,1H,2H,2H-Perfluorotetradecyl iodide(12:2FTI)	30046-31-2
16	Perfluoro nonane sulfonic acid (PFNS)	68259-12-1
17	Perfluoroundecane sulfonic acid (PFUnDS)	749786-16-1, 441296-91-9(anion)
18	Perfluorododecanesulfonic acid (PFDoDS)	79780-39-5
19	Perfluorotridecane sulfonic acid (PFTrDS)	791563-89-8
20	10:2 Fluortelomerphosphatediester (10:2 diPAP)	1895-26-7
21	Perfluorodecyl iodide (PFDI)	423-62-1
22	Perfluorododecyl iodide (PFDoDI)	307-60-8
23	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4
24	1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9
25	1H,1H,2H,2H-Perfluorodecyl methacrylate(8:2FTMA)	1996-88-9
26	2H,2H-Perfluorodecane Acid(H_2PFDA/8:2FTCA)	27854-31-5
27	1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7
28	1-Iodo-1H,1H,2H,2H-perfluorodecane (8:2 FTI)	2043-53-0
29	1H,1H,2H,2H-Perfluorodecyltriethoxysilane(8:2 FTSi(OC_2H_5)$_3$)	101947-16-4
30	Bis(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) hydrogen phosphate (8:2diPAP)	678-41-1
31	2H,2H,3H,3H-Perfluoroundecanoic acid(H_4PFUnDA/ 8:3 FTCA)	34598-33-9
32	1H,1H,2H-Heptadecafluoro-1-decene (PFDE)	21652-58-4

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(11) Perfluorohexane Acid (PFHxA) their salts and related substances content - Item 79 of Annex XVII of REACH Regulation (EC) 1907/2006& amendment (EU) 2024/2462

Test Method: In-house method

Test Instrument: Liquid Chromatography-Mass Spectrometer (LC-MS)

Test item(s)	Unit	MDL	Limit	Result(s)
				2
Perfluorohexane Acid (PFHxA) and its salts	ppb	0.01	25	N.D.
Perfluorohexane Acid (PFHxA) related compounds	ppb	0.01	1000	N.D.

Test List of Perfluorohexane Acid (PFHxA) their salts and related substances content		
No.	Chemical name	CAS No.
1	Perfluorohexane Acid (PFHxA)	307-24-4
2	Ammonium perfluorohexanoate(APFHx)	21615-47-4
3	Sodium perfluorohexanoate (PFHxA-Na) Potassium	2923-26-4
4	perfluorohexanoate(PFHxA-K)	3109-94-2
5	Perfluorohexanoyl fluoride(PFHxA-F)	355-38-4
6	Silver perfluorohexanoate(PFHxA-Ag)	336-02-7
7	Lithium perfluorohexanoate(PFHxA-Li)	90430-61-8

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(12) Perfluorooctane sulfonates(PFOS)and its derivatives content- the Persistent Organic Pollutants (POPs) Regulation (EU) 2019/1021.

Test Method: In-house method

Test Instrument: Liquid Chromatography-Mass Spectrometer (LC-MS)

Test item(s)	CAS NO.	Unit	MDL	Limit	Result(s)
					2
Perfluorooctane sulfonates (PFOS)	1763-23-1	mg/kg	0.01	/	N.D.
N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2	mg/kg	0.01	/	N.D.
N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8	mg/kg	0.01	/	N.D.
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol(N-EtFOSE)	1691-99-2	mg/kg	0.01	/	N.D.
2-(N-methylperfluoro-1-octanesulfonamido) ethanol(N-MeFOSE)	24448-09-7	mg/kg	0.01	/	N.D.
Perfluorooctane Sulfonamide (PFOSA)	754-91-6	mg/kg	0.01	/	N.D.
Perfluorooctane sulfonates(PFOS) and its derivatives	/	mg/kg	/	1000	N.D.

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(13) Perfluorooctanoic Acid and its salts (PFOAs) and PFOA related compounds content - Persistent Organic Pollutants (POPs) Regulation (EU) 2019/1021 and its amendment Directive (EU) 2020/784.

Test Method: In-house Method

Test Instrument: Liquid Chromatography-Mass Spectrometer (LC-MS)

Test item(s)	Unit	MDL	Limit	Result(s)
				2
Perfluorooctanoic Acid and its salts (PFOAs)	mg/kg	0.01	0.025	N.D.
PFOA related compounds	mg/kg	0.1	1	N.D.

List of PFOA related compounds		
No.	Chemical name	CAS No.
1	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4
2	Methyl perfluorooctanoate (Me-PFOA)	376-27-2
3	Ethyl perfluorooctanoate (Et-PFOA)	3108-24-5
4	1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9
5	1H,1H,2H,2H-Perfluorodecyl methacrylate(8:2FTMA)	1996-88-9
6	Perfluoro-1-iodooctane（PFOI）	507-63-1
7	2H,2H-Perfluorodecane Acid(H_2PFDA/8:2FTCA)	27854-31-5
8	1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7
9	1-Iodo-1H,1H,2H,2H-perfluorodecane (8:2 FTI)	2043-53-0
10	1H,1H,2H,2H-Perfluorodecyltriethoxysilane(8:2 FTSi(OC_2H_5)$_3$)	101947-16-4
11	Bis(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) hydrogen phosphate(8:2diPAP)	678-41-1
12	2H,2H,3H,3H-Perfluoroundecanoic acid(H_4PFUnDA/ 8:3 FTCA)	34598-33-9
13	1H,1H,2H-Heptadecafluoro-1-decene (PFDE)	21652-58-4
14	3-Perfluoroheptyl propanoic acid(7:3 FTCA)	812-70-4

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(14) Perfluorohexane sulfonic Acid (PFHxS) and its salts and PFHxS related compounds content - Persistent Organic Pollutants (POPs) Regulation (EU) 2019/1021 and its amendment Directive (EU) 2023/1608.

Test Method: In-house method

Test Instrument: Liquid Chromatography-Mass Spectrometer (LC-MS)

Test item(s)	CAS NO.	Unit	MDL	Limit	Result(s)
					2
Perfluorohexane sulfonic acid (PFHxS) and salts	355-46-4	mg/kg	0.01	0.025	N.D.
N-Methylperfluoro-1-hexanesulfonamide (N-Me-PFHxSA)	68259-15-4	mg/kg	0.01	/	N.D.
Perfluorohexane sulfonamide (PFHxSA)	41997-13-1	mg/kg	0.01	/	N.D.
N-[3-(dimethylamino)propyl] tridecafluorohexanesulphonamide (N-AP-FHxSA)	50598-28-2	mg/kg	0.01	/	N.D.
2-[methyl[(tridecafluorohexyl) sulphonyl]aminolethyl acrylate)) (N-MeFHSEA)	67584-57-0	mg/kg	0.50	/	N.D.
2-Propenoic acid, 2-methyl-, 2[methyl[(1,1,2,2,3,3,4,4,5,5,6,6,6tridecafluorohexyl)sulfonyl]amino]ethyl ester	67584-61-6	mg/kg	0.10	/	N.D.
2-Propenoic acid, 2-methyl-, 2[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,6tridecafluorohexyl)sulfonylJamino]ethyl ester	67906-70-1	mg/kg	0.10	/	N.D.
1-Hexanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,6tridecafluoro-N-(2-hydroxyethyl)-N-methyl (MeFHxSE)	68555-75-9	mg/kg	0.01	/	N.D.
Glycine, N-ethyl-N -[(1,1,2,2,3,3,4,4,5,5,6,6,6tridecafluorohexyl)sulfonyl]	68957-32-4	mg/kg	0.01	/	N.D.
Sum of PFHxS-related compounds	/	mg/kg	/	1	N.D.

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Note:

- mg/kg=milligram per kilogram
- mg/dm^2 = milligram per square decimeter
- ppb = parts per billion
- μg/m^2 = Micrograms per square meter
-μg/kg= microgram per kilogram
- N.D. =Not Detected (<MDL)
- MDL=Method Detection Limit
-As specified by client, only above test part(s) was analyzed.
- As specified by client, specified testing projects for testing.

*** End of Report ***

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