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Aspirational Products For Healthy Life

Nanobot Housewares Solutions Pvt. Ltd.
G-678-679,IV Phase, Boranada, Jodhpur-342012, Rajasthan
Web : www.nanobotsolutions.com **Email :** info@nanobotsolutions.com
Customer care: 1800-123-110011

GSTIN NO.08AAFCN6919D1ZE
PAN :- AAFCN6919
DCIN :- U74999RJ2017PTC058488

Doc. No.: IS: 17526:2021 Date: 04-01-2024

TITLE: DOMESTIC STAINLESS STEEL VACUUM FLASK / BOTTLE

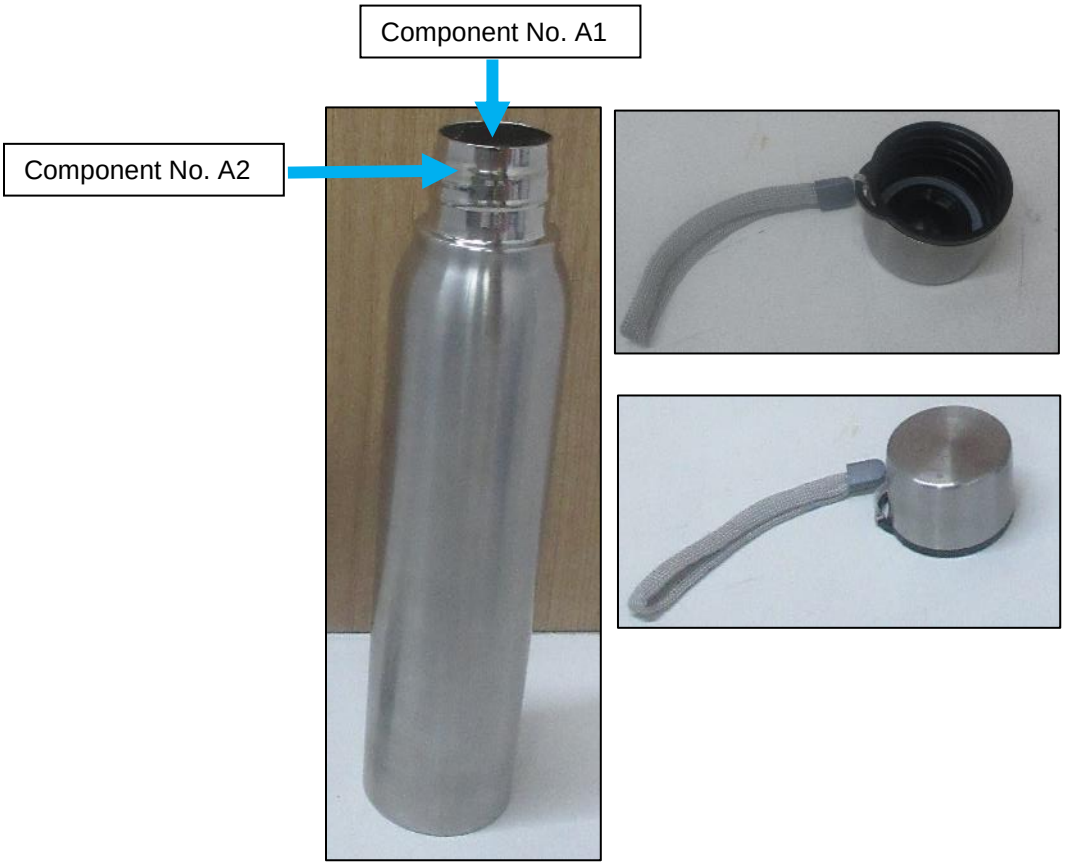
NAME OF THE COMMENTATOR/ORGANIZATION: - Nanobot Housewares Solutions Pvt. Ltd.

Sl. No.	Clause/ Sub-clause	Commentator	Type of Comments	Justification	Proposed Change/ Addition
1.	7.1.1	Vikas Jain	Technical	7.1.1 The materials used to manufacture the inner containers shall be stainless steel of grade 304 or higher grade as per IS 5522.	7.1.1 The material used to Manufacture shall be of grade of Metal composition Test Specification(s) / Regulation(s): As Per IS 15997:2012, N1 – (X10Cr15Mn9CuNi1N)
2.	7.1.2	Vikas Jain	Technical	7.1.2 The material used for the outer container shall be of stainless steel as per N2 of IS 15997 or 304 series or higher according to IS 5522.	7.1.2 The material used to Manufacture shall be of grade of Metal composition Test Specification(s) / Regulation(s): As Per IS 15997:2012, N1 – (X10Cr15Mn9CuNi1N)

Test Report No. GGN/H(FCM)/23/003013 A1

Dated. 2024.01.04

Sample Image(s) (As Received)



Laboratory:
TÜV SÜD South Asia Pvt. Ltd.
373 Udyog Vihar Phase II
Sector 20
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South Asia

Test Report No. GGN/H(FCM)/23/003013 A1

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Reference Image

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TEST REPORT

Test Report No. GGN/H(FCM)/23/003013 A1

Dated. 2024.01.04

Applicant / Company Name	:	Nanobot Housewares Solution Private Limited.
Address	:	678-679, IVth Phase, Boranada, Jodhpur-342012 (Rajasthan), India
Attention / Contact Person	:	Vikas Jain
Tested Sample	:	Received on 2023.12.16 at 05:49 P.M.
Test Period	:	2023.12.18 To 2023.12.29
Article / Sample Description	:	Vacuum insulated double wall SS bottle falcon 700ml SS 201
Colour	:	Stainless Steel
Material	:	Stainless Steel: Unplated
Product Type / End Use	:	Water Bottle
Style No.	:	Falcon 700ml SS 201
Country Of Origin	:	India
Country Of Destination	:	India

Note: The submitted sample(s) is / are Not Drawn by the Laboratory

NOTE: Unless otherwise agreed upon, Pass or Fail or Statement of compliance verdicts are given based on the measured values without any considerations of measurement uncertainties. Every test method has a measurement uncertainty which has been evaluated by the laboratory and are available on request. By taking measurement uncertainties into account it might happen that measured values can neither be assessed as Pass nor as Fail.

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South Asia

Test Report No. GGN/H(FCM)/23/003013 A1

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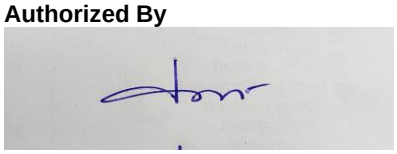
Remarks:
1. Sample(s) is / are tested as on-received basis.
2. Test(s) performed as requested by applicant.
3. Conclusion(s) of the test(s) was drawn as per compliance requirement(s) specified by applicant.
4. (##) Marked test is not under ISO/IEC 17025 accreditation.

Report Amendment Remarks: The report no GGN/H(FCM)/23/003013 dated 2023-12-29 has been superseded. The test report is amended in terms of addition of images for reference purpose , as per applicant request.

Authorized By

Vaban Pal Singh
(Authorised Signatory)

Authorized By



Iswarchandra Yadav
(Authorised Signatory)

Please Contact:
For any technical issues: Anuradha Dhamija at :Anuradha.Dhamija@tuvsud.com
For any complaint: Ashima Sapra at: Ashima.Sapra@tuvsud.com

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Test Report No. GGN/H(FCM)/23/003013 A1

Dated. 2024.01.04

Summary of Test Result(s)

S. No.	Test(s)	Conclusion(#)
1.	Sensory verification (Transfer of Odour / Smell & Taste)	Pass
2.	Migration of / Extractable elements	Pass
3.	Metal composition {As per IS 15997:2012 N1 (X10Cr15Mn9Cu2Ni1N)}	Pass
4.	Resistance to corrosion	Pass
(#) For details regarding specification(s) / regulation(s) based on which compliance is decided, refer test details.		

Material list / List of material(s) (As confirmed by applicant)

Component No.	Component description	Material	Color
A	Stainless steel Double wall vacuum insulated Falcon 700ml Bottle	--	--
A1	Metal Container (Inner Wall)	Stainless Steel	Silver
A2	Metal Container (Lip and Rim/ Outer wall)	Stainless Steel	Silver

Sampling plan (As requested by applicant)

S. No.	Test	Component No.	
1.	Sensory verification (Transfer of Odour / Smell & Taste)	A	
2.	Migration of / Extractable elements	A1	A2
3.	Metal composition	A1	A2

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Test Report No. GGN/H(FCM)/23/003013 A1

Dated. 2024.01.04

Test Result(s):

Sensory verification of smell / Odour

Test Specification(s) / Regulation(s): Framework Regulation (EC) No. 1935/2004 (Article 3 para (1-c);
Test method adopted: DIN 10955:2004.
Simulant(s) used: Distilled water.
Test condition(s): 40°C for 24 Hours;

Component No.	Result (Rating)	Compliance Requirement / Limit Max.	Conclusion
A	0	Less than 2.5	Pass

Note:
(Intermediate grades are allowed)
0 = no perceptible difference in odour.
1 = just perceptible difference in odour (still difficult to define);
2 = slight difference in odour.
3 = marked difference in odour.
4 = strong difference in odour.

Sensory verification of taste

Test Specification(s) / Regulation(s): Framework Regulation (EC) No. 1935/2004 (Article 3 para (1-c);
Test method adopted: DIN 10955:2004.
Simulant(s) used: Distilled water.
Test condition(s): 40°C for 24 Hours;

Component No.	Result (Rating)	Compliance Requirement / Limit Max.	Conclusion
A	0	Less than 2.5	Pass

Note:
(Intermediate grades are allowed)
0 = no perceptible difference in taste.
1 = just perceptible difference in taste (still difficult to define);
2 = slight difference in taste.
3 = marked difference in taste.
4 = strong difference in taste.

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TEST REPORT

Test Report No. GGN/H(FCM)/23/003013 A1

Dated. 2024.01.04

Migration of / Extractable elements

Test Method(s) & Specification(s): Technical Guide on Metals and alloys used in food contact materials and articles (1st Edition, 2013) published by the Directorate for the Quality of Medicines & HealthCare of the Council of Europe (EDQM), which is in correspondence with Council of Europe Resolution {CM/Res(2013)9} (metals & alloys used in food contact materials and articles) and supplements Article 3 para (1-a) of Regulation (EC) No. 1935/2004 (framework regulation on materials and articles intended to come into contact with food) ;
Simulant(s) used: Distilled Water.
Test condition(s): Fill at 100°C and Keep it close for 24 hours at room temp (Repeated use/ 1st+2nd Migration);
Surface area to volume / Migration ratio: 5.30 dm^2: 670 ml
Equipment(s) used: ICP – MS (Inductively Coupled Plasma – Mass Spectrometer).

Element	Limit of quantification (mg/kg)	Result(s) of (1st + 2nd) migration (mg/kg) – Component No. A1	Maximum Permissible Limit (mg/kg) / 7 times SRL
Tin (as Sn)	0.09	ND	700
Copper (as Cu)	0.04	ND	28
Iron (as Fe)	0.08	ND	280
Manganese (as Mn)	0.04	ND	12.6
Zinc (as Zn)	0.15	ND	35
Aluminium (as Al)	0.05	ND	35
Nickel (as Ni)	0.04	ND	0.98
Chromium (as Cr)	0.03	ND	1.75
Barium (as Ba)	0.04	ND	8.4
Lithium (as Li)	0.02	ND	0.336
Beryllium (as Be)	0.003	ND	0.07
Vanadium (as V)	0.004	ND	0.07
Cobalt (as Co)	0.01	ND	0.14
Arsenic (as As)	0.001	ND	0.014
Molybdenum (as Mo)	0.05	ND	0.84
Silver (as Ag)	0.03	ND	0.56
Cadmium (as Cd)	0.002	ND	0.035
Antimony (as Sb)	0.02	ND	0.28
Mercury (as Hg)	0.001	ND	0.021
Thallium (as Tl)	0.0001	ND	0.0007
Lead (as Pb)	0.003	ND	0.070
Magnesium (as Mg)	0.001	0.073	---
Titanium (as Ti)	0.06	ND	---
Conclusion		Pass	---

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Simulant(s) used: Distilled Water.
Test condition(s): Fill at 100°C and Keep it close for 24 hours at room temp (Repeated use / 3rd Migration);
Surface area to volume / Migration ratio: 5.30 dm^2: 670 ml
Equipment(s) used: ICP – MS (Inductively Coupled Plasma – Mass Spectrometer).

Element	Limit of quantification (mg/kg)	Result(s) of 3rd migration (mg/kg) – Component No. A1	Maximum Permissible Limit (mg/kg) / SRL
Tin (as Sn)	0.09	ND	100
Copper (as Cu)	0.04	ND	4
Iron (as Fe)	0.08	ND	40
Manganese (as Mn)	0.04	ND	1.8
Zinc (as Zn)	0.15	ND	5
Aluminium (as Al)	0.05	ND	5
Nickel (as Ni)	0.04	ND	0.14
Chromium (as Cr)	0.03	ND	0.250
Barium (as Ba)	0.04	ND	1.2
Lithium (as Li)	0.02	ND	0.048
Beryllium (as Be)	0.003	ND	0.01
Vanadium (as V)	0.004	ND	0.01
Cobalt (as Co)	0.01	ND	0.02
Arsenic (as As)	0.001	ND	0.002
Molybdenum (as Mo)	0.05	ND	0.12
Silver (as Ag)	0.03	ND	0.08
Cadmium (as Cd)	0.002	ND	0.005
Antimony (as Sb)	0.02	ND	0.04
Mercury (as Hg)	0.001	ND	0.003
Thallium (as Tl)	0.0001	ND	0.0001
Lead (as Pb)	0.003	ND	0.010
Magnesium (as Mg)	0.001	0.01	---
Titanium (as Ti)	0.06	ND	---
Conclusion		Pass	---

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Simulant(s) used: Distilled Water.
Test condition(s): 70° for 2 hours followed by 40°C for 24 hours (Repeated use/ 1^{st}+2^{nd} Migration);
Surface area to volume / Migration ratio: 0.45 dm^2: 80 ml
Equipment(s) used: ICP – MS (Inductively Coupled Plasma – Mass Spectrometer).

Element	Limit of quantification (mg/kg)	Result(s) of (1^{st} + 2^{nd}) migration (mg/kg) – Component No. A2	Maximum Permissible Limit (mg/kg) / 7 times SRL
Tin (as Sn)	0.09	ND	700
Copper (as Cu)	0.04	ND	28
Iron (as Fe)	0.08	0.08	280
Manganese (as Mn)	0.04	0.05	12.6
Zinc (as Zn)	0.15	0.45	35
Aluminium (as Al)	0.05	0.06	35
Nickel (as Ni)	0.04	ND	0.98
Chromium (as Cr)	0.03	ND	1.75
Barium (as Ba)	0.04	ND	8.4
Lithium (as Li)	0.02	ND	0.336
Beryllium (as Be)	0.003	ND	0.07
Vanadium (as V)	0.004	ND	0.07
Cobalt (as Co)	0.01	ND	0.14
Arsenic (as As)	0.001	ND	0.014
Molybdenum (as Mo)	0.05	ND	0.84
Silver (as Ag)	0.03	ND	0.56
Cadmium (as Cd)	0.002	ND	0.035
Antimony (as Sb)	0.02	ND	0.28
Mercury (as Hg)	0.001	ND	0.021
Thallium (as Tl)	0.0001	ND	0.0007
Lead (as Pb)	0.003	ND	0.070
Magnesium (as Mg)	0.001	0.319	---
Titanium (as Ti)	0.06	ND	---
Conclusion		Pass	---

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Simulant(s) used: Distilled water.
Test condition(s): 70° for 2 hours followed by 40°C for 24 hours (Repeated use /3rd Migration);
Surface area to volume / Migration ratio: 0.45 dm^2: 80 ml
Equipment(s) used: ICP – MS (Inductively Coupled Plasma – Mass Spectrometer).

Element	Limit of quantification (mg/kg)	Result(s) of 3rd migration (mg/kg) – Component No. A2	Maximum Permissible Limit (mg/kg) / SRL
Tin (as Sn)	0.09	ND	100
Copper (as Cu)	0.04	ND	4
Iron (as Fe)	0.08	ND	40
Manganese (as Mn)	0.04	ND	1.8
Zinc (as Zn)	0.15	ND	5
Aluminium (as Al)	0.05	ND	5
Nickel (as Ni)	0.04	ND	0.14
Chromium (as Cr)	0.03	ND	0.250
Barium (as Ba)	0.04	ND	1.2
Lithium (as Li)	0.02	ND	0.048
Beryllium (as Be)	0.003	ND	0.01
Vanadium (as V)	0.004	ND	0.01
Cobalt (as Co)	0.01	ND	0.02
Arsenic (as As)	0.001	ND	0.002
Molybdenum (as Mo)	0.05	ND	0.12
Silver (as Ag)	0.03	ND	0.08
Cadmium (as Cd)	0.002	ND	0.005
Antimony (as Sb)	0.02	ND	0.04
Mercury (as Hg)	0.001	ND	0.003
Thallium (as Tl)	0.0001	ND	0.0001
Lead (as Pb)	0.003	ND	0.010
Magnesium (as Mg)	0.001	0.015	---
Titanium (as Ti)	0.06	ND	---
Conclusion		Pass	---

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Metal composition (##)

Test Specification(s) / Regulation(s): As per IS 15997:2012 N1 (X10Cr15Mn9Cu2Ni1N)
Equipment(s) used: Arc Spark - Optical Emission Spectrometer;

S. No.	Test parameter(s) / Element	Test Result(s) (%) – Component No.		Limit Max (%)
		A1	A2	
1.	Carbon (C)	ND	ND	0.12
2.	Silicon (Si)	0.380	0.504	0.75
3.	Manganese (Mn)	9.177	9.939	8.5-10.5
4.	Nickel (Ni)	1.484	1.093	1-2
5.	Chromium (Cr)	15.79	15.11	14.5-16.0
6.	Sulphur (S)	ND	ND	0.03
7.	Phosphorus (P)	ND	ND	0.08
8.	Copper (Cu)	2.329	1.523	1.5-2.5
9.	Nitrogen (N)	0.192	0.182	0.08-0.2
Conclusion		Pass	Pass	----

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Test Report No. GGN/H(FCM)/23/003013 A1

Dated. 2024.01.04

Resistance to corrosion

Test method(s) adopted: ISO 9227:2022 (Neutral Salt Spray testing)
Equipment used: Salt Spray Tester.
Test condition(s):
(i) Concentration of Salt {Sodium chloride (NaCl)} Solution: 5 %
(ii) Chamber temperature: (35 ± 2) °C
(iii) Exposure period: 24 hours.

Sample Name	Test Result(s) / Observation(s) (*1)	Applicant's specification	Conclusion
Vacuum insulated double wall SS bottle falcon 700ml SS 201	No visual change observed on sample.	No red rust/corrosion shall observe after testing in bottle.	Pass

(*1) Observations were made visually with unaided eye.

Abbreviations
"mg/kg" denotes milligram per kilogram & is equivalent to ppm (parts per million); "ND" denotes Not Detected or below limit of quantification; ""°C" denotes degree Celsius; "%" denotes percent.

---END OF THE TEST REPORT---

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