



Test Report

Report No. A2240074319102

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The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

Applicant INKCUPS CORPORATION
Address 310 ANDOVER STREET, DANVERS, MA 01923, USA

Summary Report	PASS
Failure Test Items	--
Sample Description	ICN SB ECO SERIES INK - 165 BLACK
TRF No.	103804
Supplier	Ink Cups - Hong Kong (2901)
Assignee	Ink Cups - Hong Kong (2901)
Puma Material Code	--
Season	--
Product Type	Carry over
Development model	--
Open Spec Supplier	--
Sample Type	Material
Sample Status	Production
Sourcing Office	--
Full Test Package	Yes
Supplier Material Code	--



Approved by

Hill Zheng

Date

Mar. 11, 2024

Hill Zheng
Technical Manager

No. S597411204

Centre Testing International Group Co., Ltd.
检验检测专用章
Inspection & Testing Services

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District,
Shenzhen City, Guangdong Province, P.R. China

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Supplier Material Name	ICN SB ECO SERIES INK - 165 BLACK
Main Material	component
Sub Material Type	--
Style #/Material Package #	--
Color Way	BLACK
Finishing(base)	--
Finishing(additional)	--
Main Color	Black
Material Color / Code	--
FFC Number	--
Purchase Order No.	--
Country of Origin	Italy
Mixed Sample Testing	--
Test Specification	PUMA RSL Test Matrix for Material and Product Version 1.2023 (use from April 1, 2023)& The AFIRM RSL(version 08, 2023)
Sample Received Date	Mar. 4, 2024
Testing Period	Mar. 4, 2024 to Mar. 11, 2024

Test Conducted:

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

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<u>Summary of Test Result(s)</u>		
Test Item(s)	Test Standard	Test Result/Conclusion
Alkylphenols and Alkylphenol Ethoxylates	AP: 1 g sample/20 ml THF,sonication for 60 minutes at 70℃,analysis according to EN ISO 21084:2019, APEO: EN ISO 18254-1:2016 with determination of APEO using LC/MS or LC/MS/MS	PASS
Azo Dyes	EN ISO 14362-1:2017& EN ISO 14362-3:2017	PASS
Formaldehyde	EN ISO 14184-1:2011(E)	PASS
Arsenic(As)	DIN EN 16711-1:2016	PASS
Cadmium (Cd)	DIN EN 16711-1:2016	PASS
Lead (Pb)	CPSC-CH-E1003-09.1	PASS
Mercury (Hg)	DIN EN 16711-1:2016	PASS
Organotin compounds	ISO 22744-1:2020	PASS
Phthalates	CPSC-CH-C1001-09.4	PASS
Polycyclic Aromatic Hydrocarbons (PAHs)	AfPS GS 2019:01 PAK	PASS
Solvents/Residuals	ISO 16189:2021	PASS
Volatile Organic Compounds (VOC)	GC/MS headspace 45 minutes at 120 degrees C	PASS
*****For Further Details, Please Refer to the Following Page(s) *****		

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Tests Conducted (As Requested by the Client)

1 Alkylphenols and Alkylphenol Ethoxylates (AP: 1 g sample/20 ml THF,sonication for 60 minutes at 70°C,analysis according to EN ISO 21084:2019, APEO: EN ISO 18254-1:2016 with determination of APEO using LC/MS or LC/MS/MS)

Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
1	Nonylphenol(NP)	various	N.D.	3	--
2	Octylphenol(OP)	various	N.D.	3	--
3	sum of (NP+OP)	--	N.D.	--	≤10
4	Nonylphenol Ethoxylate(NPEOs)	various	N.D.	10	--
5	Octylphenol Ethoxylate(OPEOs)	various	N.D.	10	--
6	sum of(NP+OP+NPEOs+OPEOs)	--	N.D.	--	≤100

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2 Azo Dyes (EN ISO 14362-1:2017& EN ISO 14362-3:2017)

Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
1	4-aminobiphenyl	92-67-1	N.D.	5	≤20
2	Benzidine	92-87-5	N.D.	5	≤20
3	4-chloro-o-toluidine	95-69-2	N.D.	5	≤20
4	2-naphthylamine	91-59-8	N.D.	5	≤20
5	o-aminoazotoluene	97-56-3	N.D.	5	≤20
6	5-nitro-o-toluidine	99-55-8	N.D.	5	≤20
7	4-chloroaniline	106-47-8	N.D.	5	≤20
8	2,4-diaminoanisole	615-05-4	N.D.	5	≤20
9	4,4'-Diaminodiphenylmethane	101-77-9	N.D.	5	≤20
10	3,3'-dichlorobenzidine	91-94-1	N.D.	5	≤20
11	3,3'-dimethoxybenzidine	119-90-4	N.D.	5	≤20
12	3,3'-dimethylbenzidine	119-93-7	N.D.	5	≤20
13	4,4'-methylenedi-o-toluidine	838-88-0	N.D.	5	≤20
14	6-methoxy-m-toluidine	120-71-8	N.D.	5	≤20
15	4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	N.D.	5	≤20
16	4,4'-oxydianiline	101-80-4	N.D.	5	≤20
17	4,4'-thiodianiline	139-65-1	N.D.	5	≤20
18	o-Toluidine	95-53-4	N.D.	5	≤20
19	2,4-diaminotoluene	95-80-7	N.D.	5	≤20
20	2,4,5-trimethylaniline	137-17-7	N.D.	5	≤20
21	2-Methoxyaniline (o-Anisidine)	90-04-0	N.D.	5	≤20
22	4-aminoazobenzene	60-09-3	N.D.	5	≤20
23	2,4-xylidine	95-68-1	N.D.	5	≤20
24	2,6-xylidine	87-62-7	N.D.	5	≤20
25	2,4-diaminoanisole sulphate	39156-41-7	N.D.	5	≤20
26	2-Naphthylammoniumacetate	553-00-4	N.D.	5	≤20
27	4-chloro-o-toluidinium chloride	3165-93-3	N.D.	5	≤20
28	2,4,5-trimethylaniline hydrochloride	21436-97-5	N.D.	5	≤20

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3 Formaldehyde (EN ISO 14184-1:2011(E))

Tested Item(s)	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
	001		
Formaldehyde	N.D.	16	≤16

4 Arsenic(As) (DIN EN 16711-1:2016)

Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
1	Arsenic(As)	7440-38-2	N.D.	10	≤100

5 Cadmium (Cd) (DIN EN 16711-1:2016)

Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
1	Cadmium(Cd)	7440-43-9	N.D.	5	≤40

6 Lead (Pb) (CPSC-CH-E1003-09.1)

Tested Item(s)	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
	001		
Lead(Pb)	N.D.	5	≤90

7 Mercury (Hg) (DIN EN 16711-1:2016)

Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
1	Mercury(Hg)	7439-97-6	N.D.	0.1	≤0.5

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8 Organotin compounds (ISO 22744-1:2020)

Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
1	Dibutyltin(DBT)	683-18-1	N.D.	0.05	≤1
2	Diocetyl tin(DOT)	3542-36-7	N.D.	0.05	≤1
3	Triphenyltin(TPHT)	639-58-7	N.D.	0.05	≤0.5
4	Tripropyltin(TPrT)	2279-76-7	N.D.	0.05	≤1
5	Tributyltin(TBT)	1461-22-9	N.D.	0.05	≤0.5
6	Tricyclohexyltin(TCyT)	3091-32-5	N.D.	0.05	≤1
7	Trimethyltin(TMT)	1631-73-8	N.D.	0.05	≤1
8	Triocetyl tin(TOT)	2587-76-0	N.D.	0.05	≤1
9	Monobutyltin(MBT)	1118-46-3	N.D.	0.05	≤1

9 Phthalates (CPSC-CH-C1001-09.4)

Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
1	Dibutyl phthalate(DBP)	84-74-2	N.D.	30	≤500
2	Butyl benzyl phthalate(BBP)	85-68-7	N.D.	30	≤500
3	Di-(2-ethylhexyl) phthalate(DEHP)	117-81-7	N.D.	30	≤500
4	Di-n-octyl phthalate(DNOP)	117-84-0	N.D.	30	≤500
5	Di-isononyl phthalate(DINP)	28553-12-0, 68515-48-0	N.D.	50	≤500
6	Di-iso-decyl phthalate(DIDP)	26761-40-0, 68515-49-1	N.D.	50	≤500
7	Dimethyl phthalate(DMP)	131-11-3	N.D.	30	≤500
8	Diethyl phthalate(DEP)	84-66-2	N.D.	30	≤500
9	Dipropyl phthalate(DPrP)	131-16-8	N.D.	30	≤500
10	Diisobutyl phthalate(DIBP)	84-69-5	N.D.	30	≤500
11	Dipentyl phthalate(DPP/DPENP)	131-18-0	N.D.	30	≤500
12	Dicyclohexyl phthalate(DCHP)	84-61-7	N.D.	30	≤500
13	Diisooctyl phthalate(DIOP)	27554-26-3	N.D.	50	≤500
14	Di-n-hexyl phthalate(DNHP/DHEXP)	84-75-3	N.D.	30	≤500

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Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
15	Bis(2-methoxyethyl) phthalate(DMEP)	117-82-8	N.D.	30	≤500
16	Diisopentylphthalate(DIPP)	605-50-5	N.D.	30	≤500
17	N-Pentyl-isopentyl phthalate(NIPP)	776297-69-9	N.D.	30	≤500
18	1,2-Benzenedicarboxylic acid, di-(C7-11)-branched and linear alkyl esters(DHNUP)	68515-42-4	N.D.	50	≤500
19	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP)	71888-89-6	N.D.	50	≤500
20	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear(BADP)	84777-06-0	N.D.	30	≤500
21	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear(NHIHP)	68515-50-4	N.D.	50	≤500
22	Di-iso-hexyl-phthalates(DIH xP)	71850-09-4	N.D.	30	≤500
23	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2- benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate	68515-51-5; 68648-93-1	N.D.	50	≤500
24	sum of Phthalates	--	N.D.	--	≤1000

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10 Polycyclic Aromatic Hydrocarbons (PAHs) (AfPS GS 2019:01 PAK)

Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
1	Naphthalene	91-20-3	N.D.	0.2	--
2	Phenanthrene	85-01-8	N.D.	0.2	--
3	Anthracene	120-12-7	N.D.	0.2	--
4	Fluoranthene	206-44-0	N.D.	0.2	--
5	Pyrene	129-00-0	N.D.	0.2	--
6	Chrysene	218-01-9	N.D.	0.2	≤1
7	Benzo(a)anthracene	56-55-3	N.D.	0.2	≤1
8	Benzo(b)fluoranthene	205-99-2	N.D.	0.2	≤1
9	Benzo(k)fluoranthene	207-08-9	N.D.	0.2	≤1
10	Benzo(j)fluoranthene	205-82-3	N.D.	0.2	≤1
11	Benzo(a)pyrene	50-32-8	N.D.	0.2	≤1
12	Benzo(e)pyrene	192-97-2	N.D.	0.2	≤1
13	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.2	≤1
14	Benzo(g,h,i)perylene	191-24-2	N.D.	0.2	--
15	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.2	--
16	Acenaphthene	83-32-9	N.D.	0.2	--
17	Fluorene	86-73-7	N.D.	0.2	--
18	Acenaphthylene	208-96-8	N.D.	0.2	--
19	Sum 18 PAHs	--	N.D.	--	≤10

11 Solvents/Residuals (ISO 16189:2021)

Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
1	N,N-dimethylformamide(DM Fa)	68-12-2	N.D.	50	≤500
2	N,N-dimethylacetamide(DM AC)	127-19-5	N.D.	50	≤1000
3	N-Methyl pyrrolidone(NMP)	872-50-4	N.D.	50	≤1000

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12 Volatile Organic Compounds (VOC) (GC/MS headspace 45 minutes at 120 degrees C)

Code	Tested Item(s)	CAS No.	Test Result (mg/kg)	MDL (mg/kg)	Client's Limit (mg/kg)
			001		
1	Benzene	71-43-2	N.D.	1	≤5
2	Toluene	108-88-3	N.D.	10	--
3	o-Xylene	95-47-6	N.D.	10	--
4	m-Xylene	108-38-3	N.D.	10	--
5	p-Xylene	106-42-3	N.D.	10	--
6	Trichloromethane	67-66-3	N.D.	10	--
7	Carbon Tetrachloride(CCl ₄)	56-23-5	N.D.	10	--
8	1,2-Dichloroethane(DCE)	107-06-2	N.D.	10	--
9	1,1,1-Trichloroethane	71-55-6	N.D.	10	--
10	1,1,2-Trichloroethane	79-00-5	N.D.	10	--
11	Tetrachloroethylene	127-18-4	N.D.	10	--
12	Pentachloroethane	76-01-7	N.D.	10	--
13	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	10	--
14	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	10	--
15	Trichloroethylene	79-01-6	N.D.	10	--
16	Ethylbenzene	100-41-4	N.D.	10	--
17	1,1-Dichloroethylene	75-35-4	N.D.	10	--
18	Carbon Disulfide(CS ₂)	75-15-0	N.D.	10	--
19	CyClohexanone	108-94-1	N.D.	10	--
20	Xylene	1330-20-7	N.D.	10	--
21	Sum of Volatile Organic compounds (VOCs excluding benzene)	--	N.D.	--	≤1000

Remark: “---”Means Not Applicable,
 -MDL = Method Detection Limit
 -N.D. = Not Detected (<MDL)
 -mg/kg = ppm = parts per million

Tested Sample/Part Description

No.	CTI Sample ID	Description
1	001	Black dry ink

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Photo(s) of the sample(s)



Statement:

1. This report is considered invalidated without approval signature, special stamp;
2. The sample(s) and sample Information was/were provided by the client who should be responsible for the authenticity which CTI hasn't verified;
3. The test result(s) shown in this entrusted test report refer(s) only to the sample(s) tested;
4. Without written approval of CTI, this report can't be reproduced except in full;

*** End of Report ***