

**Intertek Testing Services, Hong Kong Limited**  
**Toys, Food and Hardlines Division**

**Test Method Information**

The following is some information about the test method used by Intertek Testing Services, Hong Kong Limited, Toys, Food and Hardlines Division (if not specified by client) for the specific items.

**Test Category: Toys and Children's Articles**

**Country: United States**

<b><u>Test</u></b>	<b><u>Test Method / Reference Method</u></b>
Toys	ASTM F963-08
CPSC -- Marking requirements for toy guns	15 CFR 1150, 16 CFR 1500,1501, 1510, 1511
CPSC -- Small ball test	16 CFR 1500.18(a)(17)
CPSC -- Bouncer ,Walker, Jumper	16 CFR 1500.18(a)(6) &1500.86(a)(4)/ASTM F2167-2005b/ASTM F977-2009
CPSC -- Labelling requirement for marbles, small balls, balloons and other small parts	16 CFR 1500.19
CPSC -- Flash point Test	16 CFR 1500.43
CPSC -- Determination of sound pressure level	16 CFR 1500.47 (Sound pressure level <130 dB)
CPSC -- Accessibility test	16 CFR 1500.48; 1500.49
CPSC -- Sharp point test	16 CFR 1500.48
CPSC -- Sharp edge test	16 CFR 1500.49
CPSC -- Impact, bite, flexure, torque, tension and compression test	16 CFR 1500.50; 1500.51; 1500.52; 1500.53
CPSC -- Dive stick and similar articles	16 CFR 1500.18(a)19(i), 1500.86(a)(7)&(8)
CPSC -- Clacker balls	16 CFR 1500.18(a) (7), 1500.86(a)(5)
CPSC -- Hazardous chemicals for liquid in toys	16 CFR 1500.231
CPSC -- Small parts test	16 CFR 1501
CPSC -- Full Size Cribs	16 CFR 1508/ ASTM F1169-2007/ASTM F966-2000
CPSC -- Non-Full Size Cribs	16 CFR 1509/ ASTM F406-2009
CPSC -- Requirements for Rattles	16 CFR 1510
CPSC -- Requirements for Pacifiers	16 CFR 1511
CPSIA -- Requirements for Total lead in paint and other similar surface-coating	16 CFR 1303 CPSC-CH-E1003-09
CPSIA -- Requirements for Total lead in non metal products	16 CFR1303 CPSC-CH-E1002-08.1
CPSC -- Phthalates	CPSC-CH-C1001-09.3
Heavy Metals in Packaging	Model Toxics in Packaging Legislation 1998
Stuffed Toy Regulations of the Commonwealth of Pennsylvania	Stuffed Toy Regulations of the Commonwealth of Pennsylvania Clause 47.317
Carriage and strollers	ASTM F833-09
Expansion gates and expandable enclosures	ASTM F1004-09

## Test Category : Toys and Children's Articles (cont'd)

Country : Europe

<u>Test</u>	<u>Test Method / Reference Method</u>
Toys	EN 71 Part 1: 2005 +A9 EN 71 Part 2 : 2006+A1 EN 71 Part 3 : 1994 + A1 & AC :2002, EN 71 Part 4 : 1990 + A1 +A2 +A3 EN 71 Part 5 : 1993 EN 71 Part 7 :2002 EN 71 Part 8 : 2003 +A1 +A2 EN 71 Part 9 : 2005 +A1 EN 71 Part 10 : 2005 EN 71 Part 11 : 2005
Electrical Toys	EN 62115 : 2005
Toys (France)	NF EN 71-1: 2006 + A9 NF EN 71-2: 2006+A1 NF EN 71-3: 1995 +A1:2000 NF EN 71-4:1990 +A1 +A2 +A3
Electrical Toys (France)	NF EN 62115:2005
Phthalate Content Test (REACH regulation)	2005/84/EC, Amendment 2004/12/EC & 2005/20/EC
Heavy Metals in Packaging (EEC)	94/62/EEC
Color fastness for Coloured Toys (Germany)	64 LFGB B82.10-1:1985
Toys (UK)	BS EN 71 Part 1:2005 +A9 BS EN 71 Part 2:2006+A1 BS EN 71 Part 3:1995/ BS 5665 Part 3:1995 AND AMENDMENT A1 : 2001 BS EN 71 Part 4:1998+A3:2007 BS EN 71 Part 7:2002
Electrical Toys (UK)	BS EN 62115:2005
Heavy Metals in Packaging (UK)	SI 1165:1998
Surface Flash (UK)	BS 4569 : 1983
Food Imitation Safety Regulations (UK)	Food Imitation Safety Regulations 1989 No. 1292
UK The Pencils and Graphic Instruments (Safety) Regulations (UK)	SI 2406 : 1998
- Coliform count/E. coli count (By MPN/ Membrane Filtration method)	UK Toy Water Snakes (Safety) Order 1983 US FDA Bacteriological Analytical Manual Online, Chapter 4, September 2002 APHA 21e 9222 B, D & G
Test for microbial contamination	European Pharmacopoeia 6.7 & 6.8 edition (2010), Ch 2.6.12 and 2.6.13 (Part B: Harmonised Method) British Pharmacopoeia 2011 Appendix XVI B.2 and XVI B.1
Efficacy of antimicrobial preservation	European Pharmacopoeia 6.6 edition (2010), Ch 5.1.3* British Pharmacopoeia 2011 Appendix XVI C*
Remark * : Criteria A stated in the method are selected for Pharmaceutical products Criteria B stated in the method are selected for Cosmetic products	

## Test Category : Toys and Children's Articles (cont'd)

### Country : Canada

<u>Test</u>	<u>Test Method / Reference Method</u>
Physical & Flammability tests	Canadian Hazardous Product (Toys) Regulation
Pacifier	Canadian Hazardous Product (Pacifier) Regulation
Upholstered and Stuffed Articles	Canada Upholstered and Stuffed Articles Act 1987
Heavy Metals for Canada Hazardous Products Act	Canada Hazardous Products Act – Revised April 2002 Chapter H-3 Schedule 1 Part 1, Item 9
Cellulose Nitrate / Celluloid test for Canada Hazardous Products Act	Canada Hazardous Products Act – Revised April 2003 Chapter H-3, Schedule 1 Part 1, Item 7

## Test Category : Toys and Children's Articles (cont'd)

### Country : Australia and New Zealand

<u>Test</u>	<u>Test Method / Reference Method</u>
Toys (Australia and New Zealand)	AS/NZS ISO 8124: Part 1: 2010 AS/NZS ISO 8124: Part 2: 2009 AS/NZS ISO 8124: Part 3: 2009
- Non-fecal Coliform/Fecal Coliform (By MPN/ Membrane Filtration method) (Australia)	Australian N.S.W. Government Gazette No. 12 of 29 January 1999 pursuant to Section 31 of the Fair Act. 1987 on liquid filled toys and other children or infants products APHA 20e 9222 B, D & G US FDA Bacteriological Analytical Manual Online, Chapter 4, September 2002

## Test Category : Toys and Children's Articles (cont'd)

### Country : Others

<u>Test</u>	<u>Test Method / Reference Method</u>
Toys (Japan)	Japan Toy Safety Standard 2002 (2002.9.1)
Chemical tests (Japan)	Japan Toy Safety Standard 2002; Specifications and Standards for Foods, their Containers, and Packages, etc 1992 (amendment in 1995)
Toys (China)	GB 5296 : 1997; GB 9832 : 1993; GB 6675 : 2006
Toys (ISO)	ISO 8124 Part 1 : 2009 ISO 8124 Part 2 : 2007 ISO 8124 Part 3 : 1997
Toys (Malaysian)	MS ISO 8124-1:2001 MS ISO 8124-2:2008 MS ISO 8124-3: 2002 MS 1774-4:1998 MS 1774-6:1998 MS 1725:2004

<u>Test</u>	<u>Test Method / Reference Method</u>
Toys (Brazil)	NM 300-1:2002+A1:2007 NM 300-2:2002 NM 300-3:2002/ EER1:2007 NM 300-4:2002 NM 300-6:2002

### Test Category : Hardgoods items

<u>Test</u>	<u>Test Method / Reference Method</u>
Candles	EN 15493:2007
- Fire safety	EN 15426:2007
- Soot index	EN 15494:2007
- Labeling	
Candles (ASTM)	ASTM F2417-2004
Carry Cots	EN 1466: 2004 +A1:2007 (E)
Cradles	EN 12790:2009
Cookware (Europe)	EN 12983-1:2000 +A1:2004 (excluding Clause 8.1, 8.2, 8.3 and 8.4) BS EN 12983-1:2000 +A1:2004 (excluding Clause 8.1, 8.2, 8.3 and 8.4)
Cutlery (Europe)	BS 5577:1999, Clause 5, 7.1, 7.2, 7.3 and 7.6 (excluding 5.4) BS EN ISO 8442-2,1998 Amend 1 ,2 Corr No. 1 Clause 5, 7.1, 7.2 and 7.3 (excluding 5.4)
Chairs (Europe)	BS 4875-1:2007 BS EN 1022:2005 BS EN 581-1:2006 EN 581-2:2009 EN 1728:2001 BS ENEN 12520:2010
Changing Units (Europe)	EN 12221-1:2008 & -2:2008
Children's Cutlery (Europe)	EN 14372: 2004
Cots& Folding Cots (Europe)	BS EN 716-1&2:2008
Cribs & Cradles (Europe)	BS EN 1130-1:1997 &- 2:1996
Drinking Equipment (Europe)	EN 14350-1:2004
Feeding cutlery & utensils	EN 14372:2004
Glass container	ASTM C148-00 (Reapproved 2006)
Highchairs (Europe)	EN 14988-1 & 2: 2006
Kickboard	EN 13138-2:2007
Kitchen use knives	BS 5577:1999 excluding 4, 5.3, 6.5,6.6,6.8 EN ISO 8442-1:1998 +A1:2000 exclude 4, 5.4, 6, 7.7-7.9
Lighters	ISO 9994: 2005 + Amd 1:2008 (E)
Optical frame	EN ISO 12870-2004, GB/T 14214-2003
Playpens (Europe)	BS EN 12227-1:1999&2:1999
Salt spray test ( US)	ASTM B117 : 2003
Salt spray test (EN)	BS EN ISO 9227 : 2006
Sunglasses (EN)	EN 1836:2005 + A1:2007 (E)
Sunglasses (ANSI)	ANSI Z80.3 : 2001
Sunglasses test (AS)	AS /NZS 1067:2003+A1:2009
Swimming Aids (Europe)	EN 13138-1: 2008 & EN 13138-2:2007
Table (Europe)	BS EN 581-1:2006 EN 581-3: 2007 EN 1730 :2000 in corp. cor 1 and 2 / BS EN 1730:2000 BS 4875-5:2009 BS 7376:2009

<u>Test</u>	<u>Test Method / Reference Method</u>
Writing and Marking instruments (Europe)	BS 7272-1:2008 / BS 7272-2:2008 inc corr 1

### Test Category : Miscellaneous microbiological test items

<u>Test</u>	<u>Test Method / Reference Method</u>
Microbiological examination of non-sterile products	USP <51>,<61> &<62> XXXIV (2011)
Test for microbial contamination	European Pharmacopoeia 6.7 & 6.8 edition (2010), Ch 2.6.12 and 2.6.13 (Part B: Harmonised Method) British Pharmacopoeia 2011 Appendix XVI B.2 and XVI B.1
Efficacy of antimicrobial preservation	European Pharmacopoeia 6.6 edition (2010), Ch 5.1.3* British Pharmacopoeia 2011 Appendix XVI C*

Remark \* : Criteria A stated in the method are selected for Pharmaceutical products  
Criteria B stated in the method are selected for Cosmetic products

### Test Category : Food

<u>Test</u>	<u>Test Method / Reference Method</u>
Protein (crude) in Nuts and nut products	AOAC Official Method 950.48 (2005)
Nitrogen content (protein) in Meat and meat products	BS 4401: Part 2: 1980/ ISO 937-1978
Fat in Milk	AOAC Official Methods 989.05 (2005)
Fat in ice cream	AOAC Official Methods 952.06 (2005)
Fat (crude) in meat	AOAC Official Methods 960.39 (2005)
Fat (crude) in nuts and nut products	AOAC Official Methods 948.22 (2005)
Salt (chlorine as sodium chloride) in seafood	AOAC Official Methods 937.09 (2005)
Salt (chlorine as sodium chloride) meat	AOAC Official Methods 935.47 (2005)
Sodium chloride in canned vegetables	AOAC Official Methods 939.10B Method II (2005)
Moisture in meat	AOAC Official Methods 950.46B (2005)
Water content in fats and fatty oils	BS 684: Section 1.16: 1981 ISO 934-1980
Fatty acids (free) in crude and refined oils	AOAC Official Method 940.28 (2005)
Peroxide value in oils and fats	AOAC Official Method 965.33 (2005)
- Mold and yeast (total) count (Dilution plating technique)	US FDA Bacteriological Analytical Manual Online, Chapter 18 Jan 2001
- Standard plate count (Conventional plate count method)	US FDA Bacteriological Analytical Manual Online, Chapter 3 Jan 2001
- Coliform count (pour plate)	US FDA Bacteriological Analytical Manual Online, Chapter 4 Sept 2002
- Coliform count (MPN)	US FDA Bacteriological Analytical Manual Online, Chapter 4 Sept 2002
- E. coli count	US FDA Bacteriological Analytical Manual Online, Chapter 4 Sept 2002
- Salmonella	US FDA Bacteriological Analytical Manual Online, Chapter 5 Dec 2007
- Staphylococcus aureus(coagulase positive)	US FDA Bacteriological Analytical Manual Online, Chapter 12 Jan 2001

## Test Category : Drinking Water

<u>Test</u>	<u>Test Method / Reference Method</u>
Total hardness :-	APHA 21e 2340 A, B, C
- Calcium content	APHA 21e 3500-Ca B
- Magnesium content	APHA 21e 3500-Mg B
Chloride	APHA 21e 4500- Cl <sup>-</sup> B
pH	APHA 21e 4500-H <sup>+</sup> B
Phosphate	APHA 21e 4500-P B and C
Total dissolved solid	APHA 17e 2540 C
Total suspended solid	APHA 17e 2540 D
Metals	APHA 21e 3030 E, 3111B
Microbiological tests: -	
- Total Coliform (By Membrane Filtration Method)	APHA 21e 9222 B
- Fecal Coliform/E.coli (By Membrane Filtration Method)	APHA 21e 9222 D & G

## Test Category : Food Contacting Articles

<u>Test</u>	<u>Test Method / Reference Method</u>
US FDA test for ABS	21 CFR 177.1020
US FDA test for Acrylic	21 CFR 177.1010
US FDA test for Acrylonitrile copolymer	21 CFR 180.22
US FDA test for EVA	21 CFR 177.1350
US FDA test for Melamine formaldehyde	21 CFR 177.1460
US FDA test for Nylon	21 CFR 177.1550
US FDA test for paper and paperboard	21 CFR 176.170
US FDA test for PE, PP or olefin copolymer	21 CFR 177.1520
US FDA test for PET	21 CFR 177.1630
US FDA test for Polycarbonate	21 CFR 177.1580
US FDA test for Polyester	21 CFR 177.2420
US FDA test for Polymeric coating	21 CFR 175.300
US FDA test for POM	21 CFR 177.2470
US FDA test for PS	21 CFR 177.1640
US FDA test for Rubber	21 CFR 177.2600
US FDA VCM test	21 CFR 177.1975
US FDA leachable lead and cadmium test on ceramic ware	CPG 7117.06 : 1995; CPG 7117.07 : 1995
US FDA leachable lead and cadmium test on silver plated ware	CPG 7117.05 : 1995
Leachable lead and cadmium on tableware (California)	California Tableware Safety Program
Leachable lead and cadmium test on ceramic and decorated glass tumblers (Lip and Rim) (US)	ASTM C927-2004
Leachable lead and cadmium test on ceramic ware (EU)	84/500/EEC
Overall migration test (EU)	EN 1186 :2002
Leachable lead and cadmium test on ceramic and glass and enamel ware (Germany)	DIN EN 1388 :1995 DIN 51032 : 1986
Leachable lead and cadmium test on ceramic and glassware (Canada)	Canadian Hazardous Products (Glazed Ceramics and Glassware) Regulations 2007
Leachable lead and cadmium test on ceramic and enamel ware (Australia)	Australian customs (Prohibited Imports) Regulation 1956 REG 4E
Leachable lead, cadmium, arsenic and antimony test on ceramic and decorated glass tumblers (New Zealand)	New Zealand Food Regulations (Safety Regulation) 2002, Schedule 1
Leachable lead and ceramic test on ceramic, enamel and glassware (Japan)	Specifications and Standards for Foods, their Containers, and Packages, etc (NOTIFICATION NO. 370 OF MINISTRY OF HEALTH, LABOUR AND WELFARE, 1959), (NOTIFICATION NO. 416 OF MINISTRY OF HEALTH, LABOUR AND WELFARE, AMENDMENT ON 31/7/08), UNDER THE JAPAN FOOD SANITATION LAW (LAW NO. 233, 1947).
Leachable lead and cadmium on glass (ISO)	ISO 7086-1 and ISO 7086-2 : 2000
Leachable lead and cadmium test on ceramic and enamel ware (ISO)	ISO 6486-1 and ISO 6486-2 : 1999

## Test Category : Chemical Tests

<u>Test</u>	<u>Test Method / Reference Method</u>
Battery (EU) test	2006/66/EC
Battery (US) testing	US Mercury Containing and Rechargeable Battery Management Act 1996
Bisphenol A content	Solvent Extraction / HPLC
Density	S.G. Bottle / Hydrometer
Detection of PVC	Flame test / Infra-red Spectrometry
Formaldehyde in wood	EN 717-3 : 1996
Metal content	Acid Digestion / ICP - Optical emission spectrometry / AAS
ODC	Head Space GCMS
pH value	pH meter
Plastic identification test	Flame test / chemical test / Infra-red Spectrometry
Smell test	DIN 10955 : 1983
Extractable PCP	German Chemical Prohibition Regulation Appendix 15, § 64 LFGB B 82.02-8 2001 (GC-ECD & GC-MSD)
Azo colourants	CEN ISO/TS 17234:2003 BS EN 14362-1 & 2 :2003 EN 14362- 1 & 2 :2003 64 LFGB B82.02-2 Jun 2004 64 LFGB B82.02-3(v) Jun 2004 64 LFGB B82.02-4 Jun 2004 (HPLC-DAD and GC-MSD)
Release of Nickel	BS EN 1811:1999 +A1:2008 and BS EN 12472:2005 +A1:2009
Lead ,Cadmium, Mercury, Chromium (VI) in plastic materials in Electrical & Electronic equipment	IEC 62321:2008 EPA 3052:1996 EPA 3060A:1996 EPA 7196A:1992
Chromium(VI) in metals materials in Electrical & Electronic equipment	IEC 62321 EDITION 1.0:2008 ISO 3613:2000
Organotin compound	Solvent Extraction/ GCMS
Dimethylfumarate	In house method
Polybrominated Biphenyl and Polybrominated Diphenyl Ethers	IEC 62321:2008

## Test Category : Environmental Tests

<b>Test</b>	<b>Test Method / Reference Method</b>
Acidity	APHA, Part 2310, 19e
Alkalinity	APHA, Part 2320, 19e
Ammonical Nitrogen Content	APHA, Part 4500-NH <sub>3</sub> C, 19e
Bicarbonate Content	APHA, Part 2320, 19e
Biochemical Oxygen Demand	APHA, Part 5210 B, 20e
Carbonate Content	APHA, Part 2320, 19e
Chemical Oxygen Demand	APHA, Part 5220 B/D, 20e
Chloride Content	APHA, Part 4500-Cl B, 20e
Colour	Lovibond Tintometer ; US EPA 110.1
Conductivity	APHA, Part 2510, 19e
Cyanide Content	APHA, Part 4500-CN E, 19e
Detergents-Anionic	APHA, Part 5540 C, 19e
Detergents-Cationic	The testing of water, Merck, P86-89, 9e
Detergents-Non-ionic	BS 6068 Section 2.24: 1986
Dissolved Oxygen	APHA, Part 4500-O, 19e
Dissolved Solid Content	APHA, Part 2540 C, 17e
Fixed Solid Content	APHA, Part 2540 E, 19e
Fluoride Content	APHA, Part 4500-F D, 19e
Nitrate Nitrogen Content	APHA, Part 4500-NO <sub>3</sub> B/D, 19e
Nitrite Nitrogen Content	APHA, Part 4500-NO <sub>2</sub> B, 19e
Oil & Grease	APHA, Part 5520 B, 20e
pH value	APHA, Part 4500-H, 20e
Phenol Content	HPLC determination
Phosphate Content	APHA, Part 4500-P C, 19e
Residual Chlorine Content	APHA, Part 4500-Cl B, 19e
Salinity	APHA, Part 2520 B, 19e
Settleable Solid	APHA, Part 2540 F, 19e
Silica Content	APHA, Part 4500-Si D, 19e
Sulphate Content	APHA, Part 4500-SO <sub>4</sub> E, 19e
Sulphide Content	APHA, Part 4500-S <sub>2</sub> - D, 19e
Suspended Solid Content	APHA, Part 2540 D, 17e
Temperature	APHA, Part 2550, 19e
Total Hardness	APHA, Part 2340, 19e
Total Kjeldahl Nitrogen	APHA, Part 4500-Norg B & 4500-NH <sub>3</sub> C, 19e
Total Solid Content	APHA, Part 2540, 19e
Turbidity	APHA, Part 2130, 19e
Heavy metal in water	APHA, Part 3500, 19 & 20e
Heavy metal (Cd, Cr, Cu, Pb, Ni, Zn) in sediment	ASTM D3974: 1990
Arsenic in sediment	APHA, Part 3114C, 19e
Mercury in sediment	APHA, Part 3112 B, 19e
Polynuclear Aromatic Hydrocarbons	US EPA 8270C
Polychlorinated Biphenyls	US EPA 8082
Organochlorine Pesticides	US EPA 8081C

Remark : For the test methods of HOKLAS accredited test items in HOKLAS endorsed test reports, please refer to the accreditation scope in HOKLAS web site:

<http://www.itc.gov.hk/en/doc/quality/hkas/hoklas/005.pdf>

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