

Test Report

REPORT NO. : LPCI/09985/10
CTS REF. : CTS/10/1958/Nitto Denko
DATE REPORTED : 24th May, 2010
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Nitto Denko Electronics (Malaysia) Sdn. Bhd.
No. 2, Persiaran Budiman, Seksyen 23, 40300 Shah Alam,
Selangor Darul Ehsan.

The following merchandise was (were) submitted and identified by the client as:

Sample Description : MP-180 series
Sample Receiving Date : 18/05/2010
Testing Period : 18/05/2010 to 24/05/2010

Test Result : Please see the next page

Analysts : Ng Mei Kheng & Yee Sook Wai

SGS LABORATORY SERVICES (M) SDN. BHD.



CHONG KIEN LEN
B.Sc.(HONS) AMIC
LAB MANAGER

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Company : **Nitto Denko Electronics (Malaysia) Sdn. Bhd.**
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Selangor Darul Ehsan.

Test Result

Sample Description : MP-180 series

Test Item (s) :	Unit	Method	Instrument	MDL	Results
Chromium VI (Cr6+)	ppm	IEC 62321 : 2008 Annex C	UV Vis - Spectrophotometer	1	N.D.
Cadmium (Cd)	ppm	IEC 62321 : 2008	ICP OES	1	N.D.
Mercury (Hg)	ppm	IEC 62321 : 2008	ICP OES	1	N.D.
Lead (Pb)	ppm	IEC 62321 : 2008	ICP OES	1	N.D.

NOTE: (a) N.D. = Not detected (<MDL)
 (b) ppm = mg/kg
 (c) MDL= Method Detection Limit

Analyst: Ng Mei Kheng

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Test Result

Sample Description : MP-180 series

Test Item (s) :	Unit	Method	Instrument	MDL	Result
PBBs (Polybrominated Biphenyls)					
Monobromo Biphenyl	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Dibromo Biphenyl	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Tribromo Biphenyl	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Tetrabromo Biphenyl	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Pentabromo Biphenyl	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Hexabromo Biphenyl	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Heptabromo Biphenyl	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Octabromo Biphenyl	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Nonabromo Biphenyl	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Decabromo Biphenyl	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
PBDEs (Polybrominated Diphenyl ethers)					
Monobromo Diphenyl Ether	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Dibromo Diphenyl Ether	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Tribromo Diphenyl Ether	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Tetrabromo Diphenyl Ether	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Pentabromo Diphenyl Ether	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Hexabromo Diphenyl Ether	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Heptabromo Diphenyl Ether	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Octabromo Diphenyl Ether	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Nonabromo Diphenyl Ether	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.
Decabromo Diphenyl Ether	%	GCMS as per IEC 62321 : 2008	GCMS	0.0005	N.D.

NOTE: (a) N.D. = Not detected (<MDL)
 (b) MDL = Method Detection Limit

Analyst: Yee Sook Wai

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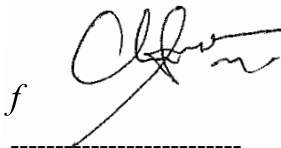
Test Result

Sample Description : MP-180 series

Nitto Denko Electronics (Malaysia) Sdn. Bhd.
LPCI/09985/10



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1. DETERMINATION OF CADMIUM CONTENT BY IEC 62321 2008

Sample Receiving and Registration
 ↓
 Cut sample in small pieces
 ↓
 Weight sample (0.2-0.5g) into digestion vessel
 ↓
 Acid digestion (Microwave)
 ↓
 "Totally Dissolved"
 ↓
 Filtration
 ↓
 Analyses by ICP

2. DETERMINATION OF LEAD CONTENT BY IEC 62321 2008

Sample Receiving and Registration
 ↓
 Cut sample in small pieces
 ↓
 Weight sample (0.2-0.5g) into digestion vessel
 ↓
 Acid digestion (Microwave)
 ↓
 "Totally Dissolved"
 ↓
 Filtration
 ↓
 Analyses by ICP

3. DETERMINATION OF MERCURY CONTENT BY IEC 62321 2008

Sample Receiving and Registration
 ↓
 Cut sample in small pieces
 ↓
 Weight sample (0.1-0.5g) into digestion vessel
 ↓
 Acid digestion (Microwave)
 ↓
 "Totally Dissolved"
 ↓
 Filtration
 ↓
 Analyses by ICP

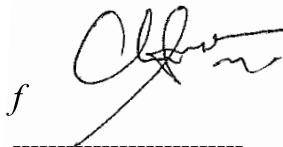
4. DETERMINATION OF HEXAVALENT CHROMIUM BY IEC 62321 2008

Sample Preparation
 ↓
 Add colour-developing reagent
 ↓
 Acidify with H₂SO₄
 ↓
 Let stand for 5-10 min
 ↓
 Analyses by UV- Spectrophotometer (540 nm)

5. DETERMINATION OF PBB/PBDE WITH GC-MS BY IEC 62321 2008

Cut sample in small pieces
 ↓
 Weight sample (0.5-2g) into extraction thimble
 ↓
 Soxhlet Extraction with Toluene
 ↓
 Filter through 0.45 um membrane filter
 ↓
 Analyses by GC-MS (with appropriate dilution)

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