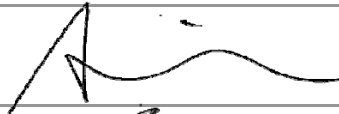



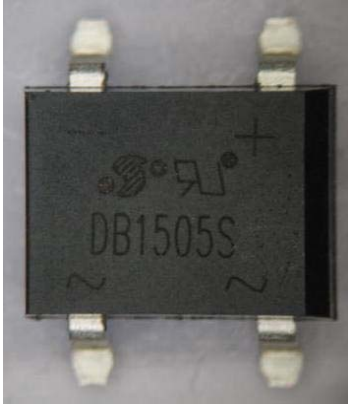


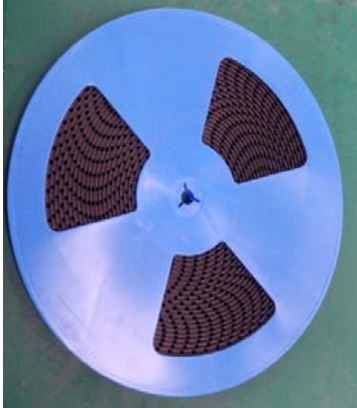


Product/Process Change Notification

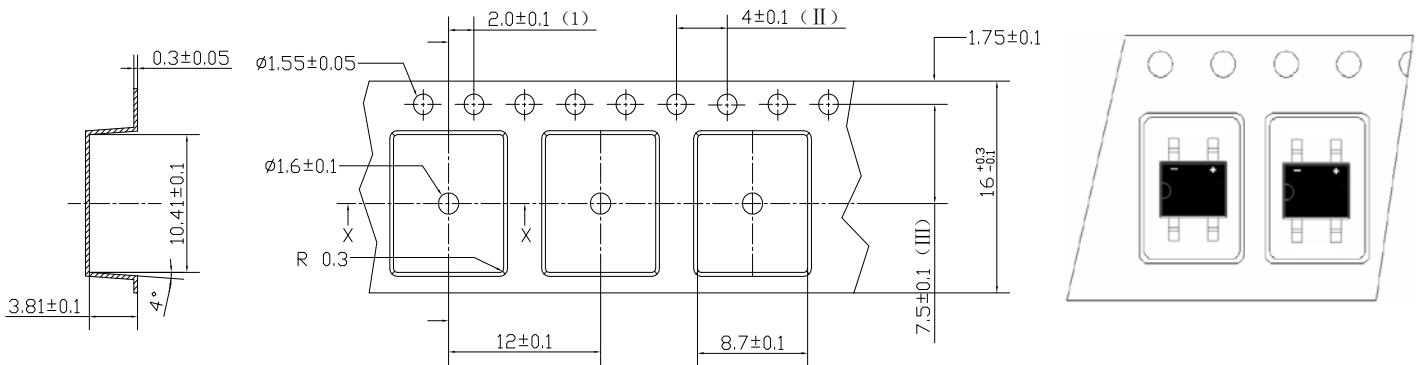
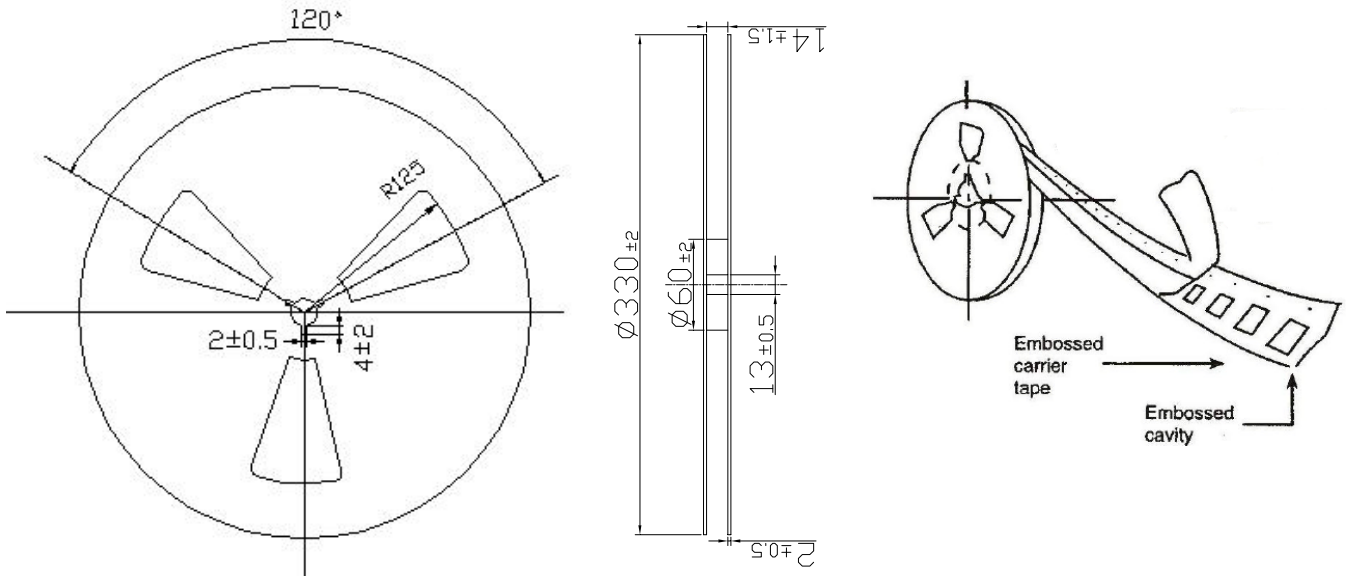
PCN#	Effective Date	Issue Date
2014-08-22C-02	2014/11/22	2014/8/22
PCN Classification	Product Category	
Major	Bridge Diode	
Subject		
Change assembly factory for DB-1S package		
Affected Product(s)		
DB1501S~DB1507S. DB201S~DB207S.		
Description of Change(s)		
Original assembly factory EOL, thus we change assembly factory; The new assembly factory Good-ARK electronics CO., LTD, located in the No.31 Tongxi Road, TongAn Economic Development Zone, 215153, Suzhou, Jiangsu, P.R.China.		
Content of Change(s)		
Assembly house.		
Impact(s)		
None		
Attachment(s)		
Reliability test report. SGS Report. Packge information. Specification.		

Approval		
Issue by	Alice Lai	e-mail: alice@secosgmbh.com
Development Engineer		Alice Lai
QA Manager		Peter Yang
General Manger		Mathew Liu

For more information, please contact us directly or visit our website <http://www.secosgmbh.com>

Reference of	
Original	News
 <p>Top View</p>	 <p>Top View</p>
 <p>Back View</p>	 <p>Back View</p>
 <p>Reel</p>	 <p>Reel</p>

DB-1S



Unit: mm

Reel	Reel Size	Box	Box Size (mm)	Carton	Carton Size (mm)
1,500pcs	13 inch	3,000 pcs	350*350*40	24,000	350*350*350



SeCoS Corporation

Reliability Testing Summary Report

Date: 2014/08/20

Document No.: SH14 -08- 01

Test Item	P/N	Test Condition	(LTPD)	Sample Numbers	Allow Fall Numbers	Fall Numbers	Result
HTRB High Temp Reverse Bias	DB1507S	100 ± 10°C, 80% VR, T = 1000hrs		77	0	0	ACC
HTSL High Temperature Storage Life	DB1507S	150°C, T = 1000 hrs		77	0	0	ACC
PCT Pressure Cooker Test	DB1507S	121°C, 29.7PSIG, 168 hrs		77	0	0	ACC
TCT Temperature Cycle Test	DB1507S	-55°C/30min, 150°C/30min, For 1000 Cycle		77	0	0	ACC
THT High Temperature High Humidity Test	DB1507S	85 ± 2°C, RH=85±5%, 1000 hrs		77	0	0	ACC
Solderability	DB1507S	245 ± 5°C / 5Sec, The inspected area of each lead must have 95% solder coverage minimum.		10	0	0	ACC

Judgment:

qualified unqualified

Testing Start Date: 2014.07.01 Testing End Date: 2014.08.20

Tester: Leo Hsia Approval: Peter Yang



SeCoS Corporation

Electrical Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 25°C

Test Date: 2014.07.01 ~ 2014.07.01

Test Standard : Specifications

Operator: Leo Hsia

Test Result: PASS

No	VF (mV)	IR (uA)
1	938.0mV	0.098uA
2	935.0mV	0.032uA
3	941.1mV	0.085uA
4	942.1mV	0.043uA
5	935.3mV	0.088uA
6	943.3mV	0.094uA
7	937.4mV	0.093uA
8	938.4mV	0.042uA
9	939.9mV	0.041uA
10	937.2mV	0.069uA
11	940.3mV	0.096uA
12	934.2mV	0.033uA
13	938.6mV	0.072uA
14	942.1mV	0.037uA
15	935.3mV	0.043uA
16	938.5mV	0.057uA
17	940.6mV	0.072uA
18	936.8mV	0.044uA
19	941.6mV	0.088uA
20	938.9mV	0.059uA
21	939.9mV	0.054uA
22	940.2mV	0.035uA
23	943.5mV	0.084uA
24	942.0mV	0.054uA
25	936.2mV	0.069uA
26	935.8mV	0.038uA
27	941.0mV	0.045uA
28	941.4mV	0.041uA
29	938.0mV	0.042uA
30	943.0mV	0.050uA
31	941.2mV	0.041uA
32	943.1mV	0.079uA
33	943.0mV	0.086uA
34	941.4mV	0.092uA
35	940.7mV	0.073uA
36	939.7mV	0.050uA
37	938.8mV	0.081uA
38	941.9mV	0.058uA
39	939.5mV	0.096uA
40	943.8mV	0.077uA
41	943.1mV	0.044uA



SeCoS Corporation

Electrical Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 25°C

Test Date: 2014.07.01 ~ 2014.07.01

Test Standard : Specifications

Operator: Leo Hsia

Test Result: PASS

No	VF (mV)	IR (uA)
42	939.0mV	0.032uA
43	940.7mV	0.032uA
44	939.4mV	0.091uA
45	937.2mV	0.046uA
46	944.0mV	0.086uA
47	937.5mV	0.047uA
48	937.8mV	0.091uA
49	935.9mV	0.056uA
50	941.6mV	0.063uA
51	934.5mV	0.065uA
52	935.2mV	0.031uA
53	934.3mV	0.035uA
54	940.6mV	0.033uA
55	940.8mV	0.068uA
56	940.4mV	0.080uA
57	941.1mV	0.046uA
58	943.0mV	0.093uA
59	934.8mV	0.049uA
60	936.8mV	0.044uA
61	940.9mV	0.043uA
62	938.9mV	0.088uA
63	940.6mV	0.082uA
64	940.1mV	0.087uA
65	939.9mV	0.052uA
66	934.8mV	0.034uA
67	938.2mV	0.095uA
68	936.4mV	0.046uA
69	938.9mV	0.039uA
70	943.4mV	0.082uA
71	936.5mV	0.046uA
72	937.5mV	0.069uA
73	936.4mV	0.091uA
74	943.0mV	0.073uA
75	943.6mV	0.044uA
76	938.7mV	0.049uA
77	941.5mV	0.037uA

Made By: Leo Hsia

Approval: Peter Yang



SeCoS Corporation

High Temperature Reverse Bias Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 100 ± 10°C, 80% VR, T = 1000 hrs

Test Date: 2014.07.01 ~ 2014.08.13

Test Standard : JESD22 STANDER Method-A108

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	936.7mV	0.092uA	941.2mV	0.082uA
2	942.0mV	0.066uA	935.0mV	0.047uA
3	941.0mV	0.052uA	941.9mV	0.076uA
4	941.1mV	0.040uA	942.3mV	0.036uA
5	941.0mV	0.098uA	936.0mV	0.072uA
6	937.5mV	0.071uA	936.4mV	0.090uA
7	936.7mV	0.081uA	942.2mV	0.055uA
8	937.3mV	0.038uA	941.7mV	0.049uA
9	936.9mV	0.075uA	940.7mV	0.043uA
10	935.9mV	0.048uA	939.2mV	0.079uA
11	935.0mV	0.098uA	939.6mV	0.096uA
12	939.6mV	0.095uA	938.5mV	0.090uA
13	943.1mV	0.066uA	943.6mV	0.097uA
14	940.8mV	0.071uA	939.6mV	0.062uA
15	937.5mV	0.042uA	942.0mV	0.030uA
16	936.5mV	0.035uA	943.0mV	0.050uA
17	940.2mV	0.047uA	938.2mV	0.048uA
18	935.6mV	0.052uA	943.9mV	0.045uA
19	937.7mV	0.091uA	935.6mV	0.069uA
20	941.8mV	0.094uA	936.7mV	0.061uA
21	940.7mV	0.084uA	937.5mV	0.062uA
22	937.5mV	0.075uA	944.1mV	0.070uA
23	943.0mV	0.038uA	944.1mV	0.094uA
24	941.2mV	0.080uA	939.4mV	0.055uA
25	934.8mV	0.093uA	938.2mV	0.076uA
26	937.5mV	0.092uA	939.5mV	0.083uA
27	936.6mV	0.070uA	935.4mV	0.035uA
28	938.2mV	0.068uA	934.9mV	0.091uA
29	936.7mV	0.094uA	937.6mV	0.043uA
30	943.4mV	0.066uA	934.9mV	0.078uA
31	943.5mV	0.081uA	935.1mV	0.042uA
32	937.7mV	0.078uA	937.2mV	0.080uA
33	943.8mV	0.088uA	941.2mV	0.077uA
34	937.8mV	0.082uA	934.6mV	0.085uA
35	939.3mV	0.061uA	937.7mV	0.080uA
36	935.3mV	0.079uA	938.7mV	0.082uA
37	939.8mV	0.066uA	941.9mV	0.058uA
38	943.4mV	0.092uA	941.6mV	0.086uA
39	935.2mV	0.059uA	941.2mV	0.060uA
40	941.9mV	0.054uA	942.0mV	0.075uA



High Temperature Reverse Bias Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 100 ± 10°C, 80% VR, T = 1000 hrs

Test Date: 2014.07.01 ~ 2014.08.13

Test Standard : JESD22 STANDER Method-A108

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
41	936.4mV	0.044uA	937.4mV	0.093uA
42	938.5mV	0.098uA	939.1mV	0.048uA
43	935.7mV	0.030uA	943.2mV	0.047uA
44	943.7mV	0.088uA	943.8mV	0.072uA
45	936.8mV	0.042uA	938.6mV	0.073uA
46	942.9mV	0.050uA	939.4mV	0.070uA
47	939.3mV	0.099uA	935.0mV	0.090uA
48	936.6mV	0.079uA	939.9mV	0.038uA
49	938.3mV	0.097uA	942.8mV	0.049uA
50	936.9mV	0.040uA	934.2mV	0.098uA
51	943.3mV	0.077uA	938.3mV	0.040uA
52	943.1mV	0.043uA	937.0mV	0.051uA
53	942.2mV	0.077uA	941.8mV	0.077uA
54	939.5mV	0.035uA	942.1mV	0.069uA
55	943.1mV	0.034uA	937.1mV	0.080uA
56	936.6mV	0.093uA	939.6mV	0.062uA
57	935.4mV	0.092uA	943.8mV	0.078uA
58	937.9mV	0.088uA	942.1mV	0.042uA
59	940.0mV	0.030uA	942.2mV	0.059uA
60	941.0mV	0.094uA	942.5mV	0.079uA
61	941.0mV	0.040uA	942.6mV	0.073uA
62	941.6mV	0.050uA	934.9mV	0.054uA
63	942.2mV	0.071uA	943.4mV	0.070uA
64	936.4mV	0.090uA	935.1mV	0.080uA
65	941.9mV	0.039uA	943.6mV	0.074uA
66	935.2mV	0.082uA	937.8mV	0.072uA
67	942.1mV	0.070uA	934.9mV	0.092uA
68	943.8mV	0.060uA	942.4mV	0.046uA
69	941.6mV	0.039uA	942.7mV	0.096uA
70	935.2mV	0.038uA	944.0mV	0.077uA
71	935.1mV	0.064uA	939.1mV	0.087uA
72	940.8mV	0.049uA	943.4mV	0.043uA
73	937.8mV	0.048uA	937.1mV	0.058uA
74	940.9mV	0.096uA	939.8mV	0.045uA
75	935.5mV	0.070uA	940.5mV	0.062uA
76	938.3mV	0.036uA	942.2mV	0.069uA
77	937.4mV	0.099uA	934.5mV	0.085uA



SeCoS Corporation

High Temperature Storage Life Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 150°C, 1000Hrs

Test Date: 2014.07.01 ~ 2014.08.13

Test Standard : JESD22 STANDER Method-A103

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	934.9mV	0.041uA	941.4mV	0.043uA
2	942.4mV	0.096uA	941.7mV	0.055uA
3	942.4mV	0.071uA	943.3mV	0.045uA
4	936.4mV	0.095uA	941.9mV	0.096uA
5	941.0mV	0.094uA	938.9mV	0.057uA
6	937.0mV	0.082uA	936.1mV	0.073uA
7	942.1mV	0.080uA	943.7mV	0.061uA
8	944.1mV	0.037uA	939.3mV	0.063uA
9	937.3mV	0.095uA	939.5mV	0.089uA
10	939.6mV	0.038uA	940.5mV	0.094uA
11	942.8mV	0.092uA	938.5mV	0.043uA
12	936.2mV	0.066uA	943.6mV	0.077uA
13	936.8mV	0.068uA	940.5mV	0.091uA
14	943.9mV	0.061uA	938.8mV	0.082uA
15	938.8mV	0.053uA	941.3mV	0.061uA
16	942.8mV	0.066uA	939.4mV	0.080uA
17	940.1mV	0.056uA	935.8mV	0.077uA
18	940.4mV	0.074uA	943.5mV	0.085uA
19	934.3mV	0.075uA	940.2mV	0.038uA
20	936.2mV	0.094uA	938.8mV	0.057uA
21	935.0mV	0.067uA	937.0mV	0.078uA
22	942.8mV	0.096uA	940.5mV	0.040uA
23	939.2mV	0.052uA	944.0mV	0.061uA
24	935.9mV	0.085uA	936.2mV	0.065uA
25	937.1mV	0.054uA	941.5mV	0.081uA
26	942.4mV	0.034uA	937.6mV	0.072uA
27	936.5mV	0.059uA	939.1mV	0.043uA
28	937.4mV	0.094uA	940.5mV	0.038uA
29	943.8mV	0.041uA	938.8mV	0.077uA
30	943.3mV	0.096uA	942.4mV	0.074uA
31	941.5mV	0.076uA	938.7mV	0.061uA
32	939.7mV	0.044uA	939.9mV	0.075uA
33	934.3mV	0.041uA	936.5mV	0.052uA
34	941.7mV	0.044uA	936.8mV	0.041uA
35	936.3mV	0.043uA	943.8mV	0.031uA
36	938.7mV	0.069uA	936.2mV	0.057uA
37	938.0mV	0.049uA	941.0mV	0.034uA
38	935.4mV	0.093uA	940.7mV	0.095uA
39	935.4mV	0.086uA	942.2mV	0.047uA
40	937.3mV	0.093uA	939.9mV	0.096uA



High Temperature Storage Life Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 150°C, 1000Hrs

Test Date: 2014.07.01 ~ 2014.08.13

Test Standard : JESD22 STANDER Method-A103

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
41	942.7mV	0.054uA	935.4mV	0.031uA
42	943.2mV	0.069uA	941.5mV	0.045uA
43	935.4mV	0.090uA	942.6mV	0.068uA
44	940.7mV	0.056uA	944.1mV	0.057uA
45	943.4mV	0.030uA	943.0mV	0.062uA
46	936.7mV	0.058uA	936.8mV	0.098uA
47	936.8mV	0.033uA	938.0mV	0.045uA
48	938.6mV	0.062uA	937.9mV	0.095uA
49	939.5mV	0.045uA	941.0mV	0.045uA
50	942.5mV	0.055uA	939.9mV	0.036uA
51	938.4mV	0.081uA	936.2mV	0.056uA
52	942.5mV	0.073uA	942.4mV	0.035uA
53	943.2mV	0.044uA	940.9mV	0.081uA
54	940.5mV	0.053uA	936.1mV	0.067uA
55	936.1mV	0.088uA	936.5mV	0.090uA
56	935.2mV	0.042uA	935.8mV	0.064uA
57	944.0mV	0.077uA	934.3mV	0.069uA
58	942.3mV	0.068uA	939.4mV	0.082uA
59	940.7mV	0.037uA	938.1mV	0.076uA
60	943.9mV	0.090uA	940.4mV	0.069uA
61	943.1mV	0.037uA	937.9mV	0.064uA
62	941.6mV	0.086uA	937.4mV	0.055uA
63	936.4mV	0.085uA	936.5mV	0.096uA
64	936.0mV	0.090uA	943.8mV	0.087uA
65	943.7mV	0.034uA	939.8mV	0.099uA
66	935.1mV	0.098uA	942.4mV	0.040uA
67	939.5mV	0.081uA	939.3mV	0.078uA
68	939.3mV	0.031uA	943.0mV	0.053uA
69	936.3mV	0.091uA	942.1mV	0.097uA
70	940.3mV	0.090uA	937.8mV	0.081uA
71	941.3mV	0.075uA	943.2mV	0.057uA
72	943.4mV	0.085uA	940.1mV	0.090uA
73	940.7mV	0.032uA	938.3mV	0.048uA
74	942.4mV	0.088uA	942.3mV	0.061uA
75	943.4mV	0.047uA	934.2mV	0.090uA
76	937.3mV	0.038uA	938.9mV	0.042uA
77	942.5mV	0.086uA	942.2mV	0.032uA



SeCoS Corporation

Pressure Cooker Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 121°C, 100%RH, 29.7PSIG, 168Hrs

Test Date: 2014.07.07 ~ 2014.07.15

Test Standard : JESD22 STANDER Method-A102

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	941.0mV	0.070uA	943.9mV	0.066uA
2	940.8mV	0.086uA	935.6mV	0.089uA
3	934.6mV	0.043uA	935.7mV	0.093uA
4	943.9mV	0.092uA	938.2mV	0.080uA
5	941.4mV	0.097uA	941.9mV	0.042uA
6	936.9mV	0.062uA	939.0mV	0.044uA
7	943.2mV	0.063uA	940.5mV	0.083uA
8	941.1mV	0.052uA	944.1mV	0.068uA
9	939.5mV	0.061uA	942.5mV	0.051uA
10	936.1mV	0.059uA	938.2mV	0.085uA
11	940.0mV	0.060uA	938.2mV	0.082uA
12	937.0mV	0.065uA	938.5mV	0.058uA
13	935.9mV	0.058uA	942.9mV	0.061uA
14	941.9mV	0.097uA	943.2mV	0.037uA
15	943.8mV	0.081uA	942.3mV	0.042uA
16	937.9mV	0.089uA	943.2mV	0.059uA
17	936.6mV	0.041uA	942.2mV	0.094uA
18	939.9mV	0.093uA	935.1mV	0.079uA
19	937.3mV	0.098uA	939.8mV	0.082uA
20	935.8mV	0.080uA	938.7mV	0.042uA
21	941.5mV	0.054uA	942.0mV	0.032uA
22	939.6mV	0.080uA	937.9mV	0.036uA
23	941.7mV	0.068uA	935.4mV	0.092uA
24	935.4mV	0.083uA	935.6mV	0.076uA
25	936.2mV	0.084uA	935.9mV	0.087uA
26	942.7mV	0.036uA	941.2mV	0.082uA
27	940.7mV	0.054uA	938.6mV	0.065uA
28	939.1mV	0.086uA	940.9mV	0.082uA
29	935.3mV	0.053uA	934.7mV	0.040uA
30	937.2mV	0.043uA	936.4mV	0.052uA
31	942.9mV	0.082uA	936.4mV	0.060uA
32	940.8mV	0.064uA	944.0mV	0.091uA
33	935.2mV	0.076uA	939.9mV	0.068uA
34	943.6mV	0.090uA	934.7mV	0.065uA
35	940.1mV	0.084uA	936.8mV	0.093uA
36	940.9mV	0.090uA	934.6mV	0.059uA
37	934.8mV	0.036uA	936.9mV	0.092uA
38	938.2mV	0.084uA	941.7mV	0.030uA
39	937.1mV	0.078uA	936.9mV	0.056uA
40	936.9mV	0.051uA	937.7mV	0.071uA



SeCoS Corporation

Pressure Cooker Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 121°C, 100%RH, 29.7PSIG, 168Hrs

Test Date: 2014.07.07 ~ 2014.07.15

Test Standard : JESD22 STANDER Method-A102

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
41	936.9mV	0.093uA	941.4mV	0.060uA
42	937.1mV	0.064uA	939.9mV	0.055uA
43	936.6mV	0.040uA	940.6mV	0.058uA
44	936.7mV	0.039uA	936.7mV	0.080uA
45	937.4mV	0.074uA	938.0mV	0.084uA
46	941.9mV	0.067uA	940.8mV	0.071uA
47	934.4mV	0.097uA	934.9mV	0.092uA
48	943.1mV	0.085uA	938.9mV	0.081uA
49	943.7mV	0.053uA	942.1mV	0.070uA
50	944.0mV	0.041uA	936.1mV	0.075uA
51	936.2mV	0.072uA	943.8mV	0.039uA
52	934.6mV	0.033uA	942.1mV	0.076uA
53	939.5mV	0.057uA	943.5mV	0.087uA
54	938.9mV	0.037uA	937.6mV	0.064uA
55	936.7mV	0.081uA	938.6mV	0.088uA
56	941.5mV	0.055uA	942.0mV	0.077uA
57	941.4mV	0.051uA	942.3mV	0.042uA
58	936.2mV	0.088uA	943.4mV	0.045uA
59	938.2mV	0.060uA	938.9mV	0.039uA
60	940.5mV	0.097uA	934.7mV	0.078uA
61	934.4mV	0.079uA	935.9mV	0.057uA
62	939.1mV	0.082uA	943.9mV	0.056uA
63	942.8mV	0.041uA	934.7mV	0.087uA
64	936.8mV	0.059uA	936.0mV	0.033uA
65	936.2mV	0.089uA	937.2mV	0.061uA
66	941.3mV	0.065uA	935.7mV	0.038uA
67	942.6mV	0.047uA	936.5mV	0.097uA
68	943.1mV	0.056uA	941.1mV	0.070uA
69	935.8mV	0.062uA	942.5mV	0.093uA
70	939.7mV	0.074uA	937.3mV	0.033uA
71	941.7mV	0.051uA	938.6mV	0.090uA
72	936.0mV	0.080uA	935.3mV	0.094uA
73	941.4mV	0.081uA	934.8mV	0.089uA
74	937.9mV	0.056uA	938.0mV	0.081uA
75	940.7mV	0.067uA	938.9mV	0.089uA
76	935.7mV	0.034uA	936.6mV	0.062uA
77	941.5mV	0.091uA	937.8mV	0.083uA

Made By: Leo Hsia

Approval: Peter Yang



SeCoS Corporation

Temperature Cycle Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: -55°C/30min, 150°C/30min, for1000 Cycle

Test Date: 2014.07.01 ~ 2014.08.20

Test Standard : JESD22 STANDER Method-A104

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	943.0mV	0.067uA	935.6mV	0.043uA
2	936.4mV	0.039uA	936.2mV	0.037uA
3	941.8mV	0.048uA	940.5mV	0.057uA
4	939.3mV	0.081uA	942.0mV	0.053uA
5	943.9mV	0.091uA	940.9mV	0.088uA
6	938.6mV	0.095uA	944.0mV	0.057uA
7	939.1mV	0.038uA	942.2mV	0.091uA
8	942.5mV	0.098uA	938.7mV	0.040uA
9	939.4mV	0.037uA	936.3mV	0.070uA
10	936.7mV	0.061uA	937.1mV	0.064uA
11	934.9mV	0.069uA	943.3mV	0.084uA
12	941.6mV	0.092uA	942.1mV	0.056uA
13	938.6mV	0.059uA	937.5mV	0.075uA
14	940.0mV	0.086uA	937.1mV	0.046uA
15	938.9mV	0.041uA	943.4mV	0.093uA
16	940.7mV	0.072uA	934.3mV	0.069uA
17	943.3mV	0.030uA	937.4mV	0.051uA
18	942.8mV	0.075uA	938.9mV	0.071uA
19	943.5mV	0.069uA	938.9mV	0.058uA
20	935.1mV	0.077uA	939.0mV	0.061uA
21	936.1mV	0.090uA	934.8mV	0.048uA
22	942.2mV	0.071uA	936.3mV	0.099uA
23	936.1mV	0.049uA	938.5mV	0.036uA
24	937.6mV	0.052uA	940.8mV	0.096uA
25	936.3mV	0.093uA	942.4mV	0.095uA
26	942.1mV	0.060uA	938.3mV	0.087uA
27	939.0mV	0.098uA	938.1mV	0.053uA
28	938.5mV	0.098uA	941.4mV	0.060uA
29	934.9mV	0.034uA	937.9mV	0.079uA
30	938.3mV	0.071uA	941.5mV	0.091uA
31	942.0mV	0.074uA	944.0mV	0.037uA
32	935.2mV	0.043uA	941.5mV	0.058uA
33	942.1mV	0.091uA	938.8mV	0.074uA
34	939.2mV	0.093uA	936.5mV	0.030uA
35	937.1mV	0.071uA	941.6mV	0.057uA
36	936.9mV	0.030uA	941.7mV	0.094uA
37	938.5mV	0.085uA	934.5mV	0.081uA
38	937.5mV	0.096uA	935.7mV	0.089uA
39	934.9mV	0.097uA	942.0mV	0.066uA
40	938.0mV	0.093uA	936.6mV	0.076uA



SeCoS Corporation

Temperature Cycle Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: -55°C/30min, 150°C/30min, for1000 Cycle

Test Date: 2014.07.01 ~ 2014.08.20

Test Standard : JESD22 STANDER Method-A104

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
41	941.9mV	0.040uA	934.4mV	0.067uA
42	941.8mV	0.047uA	942.4mV	0.094uA
43	942.9mV	0.032uA	938.3mV	0.095uA
44	934.3mV	0.038uA	934.4mV	0.098uA
45	944.1mV	0.094uA	934.9mV	0.096uA
46	940.0mV	0.037uA	942.5mV	0.096uA
47	940.5mV	0.094uA	934.8mV	0.047uA
48	943.0mV	0.055uA	937.7mV	0.086uA
49	935.1mV	0.063uA	936.6mV	0.047uA
50	935.0mV	0.044uA	940.5mV	0.038uA
51	940.1mV	0.069uA	936.1mV	0.064uA
52	939.8mV	0.083uA	942.9mV	0.047uA
53	942.5mV	0.087uA	938.1mV	0.064uA
54	943.4mV	0.056uA	938.6mV	0.034uA
55	939.7mV	0.093uA	938.7mV	0.077uA
56	941.4mV	0.032uA	943.8mV	0.078uA
57	940.0mV	0.092uA	939.3mV	0.035uA
58	938.1mV	0.071uA	940.2mV	0.090uA
59	940.4mV	0.069uA	940.2mV	0.093uA
60	942.5mV	0.057uA	943.2mV	0.079uA
61	942.8mV	0.075uA	939.9mV	0.050uA
62	934.7mV	0.085uA	941.0mV	0.073uA
63	939.6mV	0.037uA	937.6mV	0.054uA
64	942.5mV	0.093uA	943.3mV	0.074uA
65	941.7mV	0.069uA	934.5mV	0.074uA
66	943.5mV	0.084uA	943.0mV	0.047uA
67	936.5mV	0.061uA	940.3mV	0.094uA
68	942.0mV	0.049uA	935.0mV	0.050uA
69	940.3mV	0.076uA	942.6mV	0.061uA
70	940.6mV	0.080uA	942.7mV	0.089uA
71	940.0mV	0.085uA	940.4mV	0.051uA
72	942.0mV	0.086uA	934.2mV	0.032uA
73	936.6mV	0.069uA	938.4mV	0.058uA
74	940.6mV	0.074uA	936.7mV	0.061uA
75	944.1mV	0.057uA	934.5mV	0.083uA
76	939.2mV	0.096uA	935.4mV	0.053uA
77	941.6mV	0.066uA	937.4mV	0.082uA



SeCoS Corporation

High Temperature High Humidity Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 85±2°C , 85±5%RH, 1000Hrs

Test Date: 2014.07.01 ~ 2014.08.13

Test Standard : JESD22 STANDER Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	938.5mV	0.099uA	937.7mV	0.089uA
2	934.9mV	0.073uA	936.4mV	0.059uA
3	940.1mV	0.065uA	937.6mV	0.088uA
4	940.6mV	0.082uA	938.9mV	0.086uA
5	941.2mV	0.048uA	942.1mV	0.063uA
6	942.8mV	0.083uA	936.9mV	0.055uA
7	941.7mV	0.033uA	937.3mV	0.072uA
8	937.9mV	0.060uA	942.3mV	0.074uA
9	943.9mV	0.044uA	939.1mV	0.053uA
10	938.3mV	0.030uA	938.1mV	0.045uA
11	942.7mV	0.062uA	940.9mV	0.091uA
12	940.4mV	0.076uA	937.4mV	0.042uA
13	944.1mV	0.041uA	936.0mV	0.072uA
14	936.4mV	0.090uA	936.8mV	0.082uA
15	939.4mV	0.032uA	942.3mV	0.076uA
16	942.5mV	0.081uA	937.0mV	0.047uA
17	936.9mV	0.061uA	939.9mV	0.068uA
18	943.4mV	0.070uA	936.3mV	0.059uA
19	941.8mV	0.098uA	938.8mV	0.098uA
20	941.7mV	0.058uA	942.1mV	0.061uA
21	938.8mV	0.082uA	942.8mV	0.037uA
22	938.7mV	0.074uA	943.2mV	0.077uA
23	938.1mV	0.051uA	940.5mV	0.034uA
24	934.9mV	0.080uA	937.0mV	0.049uA
25	939.3mV	0.087uA	943.2mV	0.059uA
26	940.0mV	0.083uA	940.6mV	0.081uA
27	938.6mV	0.047uA	936.2mV	0.033uA
28	943.3mV	0.087uA	941.9mV	0.036uA
29	934.4mV	0.031uA	943.7mV	0.073uA
30	940.7mV	0.054uA	940.2mV	0.057uA
31	943.5mV	0.037uA	939.9mV	0.065uA
32	939.8mV	0.094uA	938.5mV	0.057uA
33	943.1mV	0.036uA	940.0mV	0.073uA
34	934.2mV	0.065uA	936.6mV	0.031uA
35	935.5mV	0.044uA	937.3mV	0.079uA
36	941.0mV	0.046uA	937.0mV	0.042uA
37	941.7mV	0.070uA	940.5mV	0.034uA
38	937.7mV	0.046uA	943.2mV	0.037uA
39	938.6mV	0.062uA	942.7mV	0.068uA
40	937.7mV	0.037uA	944.0mV	0.039uA



High Temperature High Humidity Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 85±2°C , 85±5%RH, 1000Hrs

Test Date: 2014.07.01 ~ 2014.08.13

Test Standard : JESD22 STANDER Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
41	940.2mV	0.090uA	935.3mV	0.033uA
42	940.7mV	0.092uA	935.3mV	0.092uA
43	935.4mV	0.068uA	934.6mV	0.055uA
44	943.7mV	0.047uA	934.9mV	0.080uA
45	941.1mV	0.076uA	937.5mV	0.066uA
46	943.4mV	0.057uA	937.2mV	0.069uA
47	942.2mV	0.090uA	936.6mV	0.089uA
48	944.0mV	0.080uA	939.1mV	0.036uA
49	942.3mV	0.086uA	934.8mV	0.097uA
50	940.0mV	0.078uA	941.5mV	0.045uA
51	939.8mV	0.064uA	938.6mV	0.080uA
52	940.4mV	0.045uA	937.7mV	0.091uA
53	937.3mV	0.055uA	940.0mV	0.075uA
54	942.3mV	0.055uA	938.8mV	0.043uA
55	936.6mV	0.096uA	942.8mV	0.072uA
56	941.5mV	0.044uA	942.5mV	0.063uA
57	935.8mV	0.057uA	941.4mV	0.059uA
58	937.4mV	0.044uA	934.6mV	0.037uA
59	937.7mV	0.043uA	944.0mV	0.066uA
60	935.4mV	0.071uA	942.6mV	0.084uA
61	936.2mV	0.044uA	943.4mV	0.084uA
62	942.0mV	0.097uA	944.1mV	0.038uA
63	936.3mV	0.093uA	937.7mV	0.048uA
64	942.1mV	0.054uA	934.9mV	0.061uA
65	940.0mV	0.084uA	941.2mV	0.070uA
66	941.1mV	0.067uA	938.1mV	0.037uA
67	937.0mV	0.097uA	937.5mV	0.076uA
68	942.0mV	0.034uA	940.8mV	0.047uA
69	940.4mV	0.055uA	942.9mV	0.053uA
70	942.7mV	0.040uA	935.9mV	0.039uA
71	938.3mV	0.082uA	941.5mV	0.044uA
72	938.6mV	0.079uA	943.7mV	0.049uA
73	938.4mV	0.059uA	939.7mV	0.090uA
74	935.0mV	0.051uA	935.6mV	0.048uA
75	934.3mV	0.037uA	935.4mV	0.051uA
76	942.2mV	0.093uA	936.4mV	0.039uA
77	936.5mV	0.055uA	934.8mV	0.077uA



SeCoS Corporation

Solderability Test Data

Report No : T140820-001

Part No : DB1507S

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<1100mV@IF=1.5A, IR<10uA@VR=1000V

Test Condition: 245°C ± 5°C, 5Sec

Test Date: 2014.08.20 ~ 2014.08.20

Test Standard : JESD22 STANDER Method-B102

Operator: Leo Hsia

Test Result: PASS

No	Before		After	
	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	944.0mV	0.058uA	942.6mV	0.046uA
2	937.8mV	0.057uA	936.1mV	0.093uA
3	943.7mV	0.049uA	941.8mV	0.088uA
4	935.8mV	0.053uA	941.0mV	0.053uA
5	943.7mV	0.062uA	934.8mV	0.083uA
6	937.6mV	0.035uA	940.0mV	0.089uA
7	942.2mV	0.034uA	941.9mV	0.099uA
8	941.6mV	0.078uA	934.4mV	0.084uA
9	938.4mV	0.044uA	935.4mV	0.096uA
10	940.4mV	0.096uA	942.4mV	0.047uA

Made By: Leo Hsia

Approval: Peter Yang



Test Report

No. : CE/2014/72967B Date : 2014/08/04 Page : 1 of 48

SECOS CORPORATION
8F, NO. 33, LANE 155, SEC. 3, BEI-SHEN RD., SHEN KENG DIST., NEW TAIPEI CITY, TAIWAN

CE/ 2014/ 72967B*

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

Sample Description : GLASS PASSIVATED DICE
Sample Receiving Date : 2014/07/15
Testing Period : 2014/07/15 TO 2014/07/24

=====

Test Result(s) : Please refer to next page(s).

Conclusion : Base upon the performed tests by submitted samples, the test results of PAHs comply with the PAHs requirement according to (Category 1) of ZEK 01.4-08 of German ZLS and its amendments.

Troy Chan
Signed for
SGS TAIWAN
Chemical Laboratory – Taipei

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHDO&ROGWRQV R I 6H\YLFH SUQVHG RYHUHDI DYDIDEGH RQ UHTXHWWRUDFFHVVIEGH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV DVS I DOG IRU HQHFWRQIE IRUP DW GRFXP HQWV VXEIHFWR 7HIP V DOG &ROGWRQV IRU (HQFWRQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV 7HIP VH ' RFXP HQW DVS I S\WHQWRQ LV GLDZ Q IR VKH QP WDWBQ R I QDEIQM IQGHP QULFDFWRQ DOG IKLV GLEFWRQ LVVXHV GHUHQHG VKHUHQ \$Q\ KRGHU R I IKLV GRFXP HQWLV DGWVHG VKDWDIRLP DWRQ FROVIDIHG KKHURQ UHQFW VKH & RP SDQ\ LV IQGILQV DWVKH VLP H R I LW IQWUHQWRQ ROQ DOG Z LWLQ VKH QP LW R I FQHQWLV IQVDFWRQ U DO\ 7KH &RP SDQ\W VRQI LHVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQWGRHV QRWHI FROHDIH SDUHQV IR D VLDQVDFWRQ IURP H[HFWLVQJ DQVKHWLWJKWV DOG REQVDFWRQV XQGHUVKH VLDQVDFWRQ GRFXP HQW 7KLV GRFXP HQWFDQQRWEH LHSURGXFHG H[FHSWLD IXQD Z LWKRXWSURZ LWHQ DSSURYDOR I VKH &RP SDQ\ \$Q\ XQDXIKRULJHG DOHLDWRQ IRWHU RU IDQVDFWRQ R I VKH FROHQW RU DSSHDDQFH R I IKLV GRFXP HQWLV XQDZ IXQDQ R I HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHI [HQW R I VKH QZ 8QHQV RIKHUZ LVH VIDIHG VKH LHVXQV VKRZ Q Q IKLV VHWLHSRUWUHQURQV IR VKH VDP SQH V VHVHG



Test Report

No. : CE/2014/72967B Date : 2014/08/04 Page : 2 of 48

SECOS CORPORATION
8F, NO. 33, LANE 155, SEC. 3, BEI-SHEN RD., SHEN KENG DIST., NEW TAIPEI CITY, TAIWAN

CE/ 2014/ 72967B*

Test Result(s)

PART NAME No.1 : GLASS PASSIVATED DICE

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	32100
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Beryllium (Be)	mg/kg	With reference to US EPA Method 3050B. Analysis was performed by ICP-AES.	2	n.d.
Beryllium oxide (BeO)***	mg/kg	With reference to US EPA Method 3050B. Analysis was performed by ICP-AES.***	-	n.d.
Antimony (Sb)	mg/kg	With reference to US EPA Method 3050B. Analysis was performed by ICP-AES.	2	n.d.
Arsenic (As)	mg/kg	With reference to US EPA Method 3052. Analysis was performed by ICP-AES.	2	n.d.
Diarsenic pentoxide*** (CAS No.: 1303-28-2)	mg/kg	With reference to US EPA 3052: 1996. Analyzed by ICP-AES.***	-	n.d.
Diarsenic trioxide*** (CAS No.: 1327-53-3)	mg/kg	With reference to US EPA 3052: 1996. Analyzed by ICP-AES.***	-	n.d.
Boron (B)	mg/kg	With reference to US EPA Method 3052. Analysis was performed by ICP-AES.	2	141
Boric acid*** (CAS No.: 10043-35-3; 11113-50-1)	mg/kg	With reference to US EPA 3052:1996. Analyzed by ICP-AES.***	-	806
Disodium tetraborate, anhydrous*** (CAS No.: 1303-96-4, 1330-43-4, 12179-04-3)	mg/kg	With reference to US EPA 3052:1996. Analyzed by ICP-AES.***	-	656

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHDO&ROGUWROV R16HULFH SUQVHG RYHLDH1 DYDIDEGH RQ UHTXHVWIRUDFFHVVEQH DWKWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV DVS1 DOG IRU HQHFWURQIE IRUP DW GRFXP HQWV VXEIHFWR IR 7HIP V DOG &ROGUWROV IRU (HFUWROIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV 7HIP VH ' RFXP HQW DVS1 \$WHQWRO LV GLDZ Q IR VKH QP WDWRO R1 QDEIQM IDGHP QULFEDWRO DOG IKLV/GFVRO DVXHV GHUQHG VKHUHO \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWLQIRLP DWRO FROVIDHG KHUHO UHQHFW VKH & RP SDQ\ LV IDGLQJV DWVKH VLP H R1 LW QWUHQWRO ROQ DOG Z LWLQ VKH QP LW R1 FQHQWV IDVUQVRO U DO\ 7KH & RP SDQ\ W VRH LHVROVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRWH FROHDIH SDUHV IR D YLQVDFVRO IRP H HFWLVQJ DQVKHWLWJKWV DOG REQUWROV XQGHUWK YLQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDOQRWEH LHSURGXFHG H FHSW LQ IXQ Z WKRXW SURUZ UWHQ DSSURYDOR1 VKH & RP SDQ\ \$Q XQDXWKRLJHG DQHLWRO IRWHU RU IDVUQVRO R1 VKH FROHQW RU DSSHUQFH R1 IKLV GRFXP HQWLV XQDZ IXQDQ R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQWVH [VHQW R1 VKH QZ 8QWV R1 KHUZ LVH VDHG VKH LHVXQV VKRZ Q D\ IKLV VHWLHSRUWUHQROO IR VKH YDP SH V VHVHG



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SECOS CORPORATION

CE/ 2014/ 72967B*

8F, NO. 33, LANE 155, SEC. 3, BEI-SHEN RD., SHEN KENG DIST., NEW TAIPEI CITY, TAIWAN

Test Item(s)	Unit	Method	MDL	Result
				No.1
Tetraboron disodium heptaoxide, hydrate (CAS No.: 12267-73-1) (* 2)	mg/kg	With reference to US EPA 3052:1996. Analyzed by ICP-AES.	-	-
Polychlorinated Biphenyls (PCBs) (CAS No.: 1336-36-3)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	0.5	n.d.
Polychlorinated Naphthalene (PCNs)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.
Polychlorinated Terphenyls (PCTs)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	0.5	n.d.
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (CAS No.: 85535-84-8)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	100	n.d.
Formaldehyde (CAS No.: 50-00-0)	mg/kg	With reference to ISO 17226-1(2008). Analysis was performed by HPLC/DAD.	3	n.d.
PVC	**	Analysis was performed by FTIR and FLAME Test.	-	Negative
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.
PFOA (CAS No.: 335-67-1)	mg/kg	With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.
2- (3,5-di-tert-butyl-2-hydroxyphenyl)-2H-benzotriazole (CAS No.: 3846-71-7)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.
Cobalt dichloride (CAS No.: 7646-79-9)	mg/kg	SGS In-House method-RSTS-EE-SVHC-007. Analyzed by ICP-AES.	50	n.d.
Bromomethane (CAS No.: 74-83-9)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Sulfur Hexafluoride (SF6) (CAS No.: 2551-62-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV VVXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHDO&ROGWRQV R I 6HVLXHF SUIVHG RYHLDHI DYDIDEG RQ UHTXHWIRUDFFHVIEGH DWKWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV DVS I DOG IRU HQHFWRQIE IRUP DW GRFXP HQW VXEIHFWR IR ZHIP V DOG &ROGWRQV IRU (HFWRQIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV ZHIP VH ' RFXP HQW DVS I S'WHQWRQ LV GLDZ Q IR VKH QP WDWBQ R I QDEIQM IQGHP QULFEDWRQ DOG IKLV GLEWRQ DVXHV GHIDHG VKHUHO \$Q KRGHU R I IKLV GRFXP HQWLV DGWVHG VKDWDIRLP DWRO FROVIDHG KHUHO LHIHFV VKH & RP SDQ\ V DOG IRU D WDWBQ R I QDEIQM IQGHP QULFEDWRQ DOG Z WKLQ VKH QP W R I FQHQWV IQDQVWRQ U DO\ 7KH & RP SDQ\ W VRG HVSROVIEQW LV IR WLV & QHQW DOG WLV GRFXP HQW GRHV QRW H FROVDI H SDUHV IR D WDWBQ R I QDEIQM IQGHP QULFEDWRQ DOG REQDWRQV XQGHUVKH WDWBQV GRFXP HQW 7KLV GRFXP HQW FDOQRWEH UHSRGXFHG H FHSW IQ XQD Z WKRXW SURUZ WWHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXIKRULJHG DQHLWRQ IRWHU RU IDWVLEWRQ R I VKH FROHQW RU DSSHDQFH R I WLV GRFXP HQWLV XQDZ IXDQG R I HQGHU P D\ EH SURVHFVHG IR VKH IXQVWHV [VHQW R I VKH QZ 8QWV R I KHUZ WLV WIDHG VKH UHVXQV V KRZ Q D WLV VHWUHSRULW HURQO IR VKH VDP SH V VHVHG

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SECOS CORPORATION

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Test Item(s)	Unit	Method	MDL	Result
				No.1
Dimethyl Fumarate (CAS No.: 624-49-7)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by GC/MS.	0.1	n.d.
Tris (2-chloroethyl) phosphate (TCEP) (CAS No.: 115-96-8)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by GC/MS.	5	n.d.
Tris(1-chloro-2-propyl) phosphate (TCPP) (CAS No.: 13674-84-5)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by GC/MS.	5	n.d.
Tris(1,3-dichloro-2-propyl)phosphate (TDCPP) (CAS No.: 13674-87-8)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by GC/MS.	5	n.d.
Trixylyl phosphate (TXP) (CAS No.: 25155-23-1)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by GC/MS.	25	n.d.
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α -HBCDD, β -HBCDD, γ -HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	mg/kg	With reference to IEC 62321: 2008 method. Analysis was performed by GC/MS.	5	n.d.
4-(1,1,3,3-tetramethylbutyl) phenol, (4-tert-Octylphenol) (CAS No.: 140-66-9)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by LC/MS.	10	n.d.
Bis(2-methoxyethyl) ether (CAS No.: 111-96-6)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by GC/MS.	10	n.d.
N,N-dimethylacetamide (DMAC) (CAS No.: 127-19-5)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by GC/MS.	10	n.d.
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWRU LW * HOHDO&ROGWRQV R16HULYH SUQVHG RYHLDH1 DYDIDEGH RQ UHTXHWIRUDFFHVVEQH DWKWS. Z Z Z VJV FRP. HQ ZHIP V DOG &ROGWRQV DVS1 DOG IRUHQFWRQIE IRUP DW GRFXP HQWV VXEIHFWRU 7HIP V DOG &ROGWRQV IRU (HFWRQIE ' RFXP HQW DW KWS. Z Z Z VJV FRP. HQ ZHIP V DOG &ROGWRQV 7HIP VH ' RFXP HQW DVS1. \$WHQWRQ LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM. IDGHP QULFEDWRQ DOG IKLVGIEWRQ DVXHV GHIDHG VKHUHQ. \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWIDIRLP DWRO FROVIDIDHG KHUHQ LHIGHW VKH & RP SDQ\ LV IDGIDQV DWVKH VLP H R1 LW QWUHQWQRO ROQ DOG Z LWKQ VKH QP LW R1 FQHQWV IDQVDFWRQ U DO\ 7KH & RP SDQ\W VRQ HVSRQVIEQW LV IR LW & QHQWDOG IKLV GRFXP HQWGRHV QRWH[ROHLDH SDUHV IR D YDQVDFWRQ RRP H[HFWLQJ DQVKHWLWJKWV DOG REQJEDWRQV XQGHUWKH YDQVDFWRQ GRFXP HQW 7KLV GRFXP HQWFDQQRWEH UHSRQVHG H[FHSWQ IXQ Z WKRXWSURUZ QWVHQ DSSURYDOR1 VKH & RP SDQ\ \$Q XQDXKRULJHG DQHLWRQ IRWHU RU IDQVDFWRQ R1 VKH FROHQWV RUDSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXDQDQ R1HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHV[WHQV R1 VKH QZ 8QWV R1KHUZ VV VIDIHG VKH UHVXQV KRZ Q DQ IKLV VHWUHSRUWUHQURQ. IR VKH VDP SQH V VHVHGH



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CE/ 2014/ 72967B*

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Test Item(s)	Unit	Method	MDL	Result
				No.1
DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DINP (Di-isononyl phthalate) (CAS No.: 28553-12-0; 68515-48-0)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.01	n.d.
DIDP (Di-isodecyl phthalate) (CAS No.: 26761-40-0; 68515-49-1)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.01	n.d.
DNOP (Di-n-octyl phthalate) (CAS No.: 117-84-0)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DNHP (Di-n-hexyl phthalate) (CAS No.: 84-75-3)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DIHP (1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich) (CAS No.: 71888-89-6)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.01	n.d.
DHNUP (1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters) (CAS No.: 68515-42-4)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.01	n.d.
DMEP (Bis (2-methoxyethyl) phthalate) (CAS No.: 117-82-8)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
Di-iso-pentyl phthalate (CAS No.: 605-50-5)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (CAS No.: 84777-06-0)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
N-pentyl-isopentylphthalate	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DPP (Di-pentyl phthalate) (CAS No.: 131-18-0)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
Ethylene glycol dimethyl ether (EGDME) (CAS No.: 110-71-4)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by GC/MS.	10	n.d.
Perchlorate (CAS No.: 14797-73-0)	mg/kg	Analysis was performed by IC.	0.006	n.d.
Red phosphorus	**	Analysis was performed by Pyrolyzer-GC/MS.	-	Negative

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHLDQ&ROGWRQV R1 6HULFH SUQVHG RYHLDI DYDIDEG RQ UHTXHWIRUDFFHVIEGH DWKWS. Z Z Z VJV FRP. HQ ZHIP V DOG & ROGWRQV DVS I DOG IRU HQHFWRQIE IRUP DW GRFXP HQW VXEIHFWR IR 7HIP V DOG & ROGWRQV IRU (HQFWRQIE ' RFXP HQW DW KWS. Z Z Z VJV FRP. HQ ZHIP V DOG & ROGWRQV 7HIP VH ' RFXP HQW DVS I SWHQWRQ LV GLDZ Q IR VKH QP IDWIBQ R1 QDEIQM. IDGHP QULFEDWRQ DOG IKLV GLEWRQ DVXHV GHIDHG VKHUHO \$Q\ KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWDIRLP DWRO FROVIDHG KHUHQ LHIHFW VKH & RP SDQ\ LV IDGLQJV DWVKH VP H R1 LW QWUHQWIBQ ROQ DOG Z LWKQ VKH QP LW R1 FQHQWV IDWIKFWRQ U DO\ 7KH & RP SDQ\ W VRQ LHSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRWH (ROHLDH SDUHV IR D YDQVDFWRQ IUP H (HFUWQJ DQVKWUWJKWV DOG REQJDFWRQV XQGHUWKH YDQVDFWRQ GRFXP HQW 7KLV GRFXP HQW FDOQRWEH LHSRQVIEGH H (FHSWQ IXQ Z WKRXWSURUZ UMHQ DSSURYDOR I VKH & RP SDQ\ SQ\ XQDXIKRULJHG DOHLDWRQ IRWHUA RU IDWUFDWRQ R1 VKH FROHQW RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXDQDQ R1 HQGHUW P D\ EH SURVHFVING IR VKH IXQWVWH (HQWIR I VKH QZ 8 QWVV RIKHUZ LVH VIDHG VKH LHVXQV VKRZ Q ID\ IKLV VHWLHSRUWUHQURQ. IR VKH VDP SH V VHVHG



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SECOS CORPORATION

CE/ 2014/ 72967B*

8F, NO. 33, LANE 155, SEC. 3, BEI-SHEN RD., SHEN KENG DIST., NEW TAIPEI CITY, TAIWAN

Test Item(s)	Unit	Method	MDL	Result
				No.1
Tetrabromobisphenol A (TBBP-A) (CAS No.: 79-94-7)	mg/kg	With reference to Global SOP RSTS-E&E-121. Analysis was performed by LC/MS.	10	n.d.
TBBP-A-bis (CAS No.: 21850-44-2)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by HPLC/DAD/MS.	5	n.d.
Halons				
Halon-1211 (CAS No.: 353-59-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Halon-1301 (CAS No.: 75-63-8)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Halon-2402 (CAS No.: 124-73-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Organic-tin compounds				
Tributyl Tin (TBT) (CAS No.: 688-73-3)	mg/kg	With reference to ISO 17353. Analyzed by GC/FPD.	0.03	n.d.
Triphenyl Tin (TphT)	mg/kg	With reference to ISO 17353. Analysis was performed by GC/FPD.	0.03	n.d.
Dibutyl Tin (DBT)	mg/kg	With reference to ISO 17353. Analysis was performed by GC/FPD.	0.03	n.d.
Diocetyl Tin (DOT)	mg/kg	With reference to ISO 17353. Analysis was performed by GC/FPD.	0.03	n.d.
Asbestos				
Actinolite (CAS No.: 77536-66-4)	%	With reference to EPA 600/R-93/116 method. Analysis was performed by Stereo Microscope (SM), Dispersion Staining Polarized Light Microscope (DS-PLM) and X-ray Diffraction Spectrometer (XRD).	-	Negative
Amosite (CAS No.: 12172-73-5)	%		-	Negative
Anthophyllite (CAS No.: 77536-67-5)	%		-	Negative
Chrysotile (CAS No.: 12001-29-5)	%		-	Negative
Crocidolite (CAS No.: 12001-28-4)	%		-	Negative
Tremolite (CAS No.: 77536-68-6)	%		-	Negative

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHDO&ROGWRQV R1 6HULYH SUQVHG RYHLDH1 DYDIDEQH RQ UHTXHVWIRUDDFFHVVEQH DWKWS. Z Z Z VJV FRP. HQ ZHIP V DOG & ROGWROV DVS1 DOG IRU HQHFWROIE IRUP DW GRFXP HQW VXEIHFWR IR 7HIP V DOG & ROGWROV IRU (HFVROIE ' RFXP HQW DW KWS. Z Z Z VJV FRP. HQ ZHIP V DOG & ROGWROV 7HIP VH ' RFXP HQW DVS1. SWHQVRO LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM. IQGHP QULFDRQ DOG IKLV GLEVRQ DVXHV GHVHG VKHUHQ. \$Q KRGHU R1 IKLV GRFXP HQWLV DGWVHG WKDW IRUP DWVRO FROVIDHG KHUHQ UHQFW VKH & RP SDQ\ W IQGILJV DWVKH VLP H R1 LW IQWVHQWBQ ROQ DOG Z LWLQ VKH QP LW R1 FQHQWV IQWVFKVRO U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRWH (ROHLDH SDUHV IR D WLDQVDFVRO IRP H (HFVLDQ DQVKHWLWKV DOG REQJDRQV XQGHVVKH WLDQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDOQRWEH UHSURGXFHG H (FHSWLD IXQ Z WKRXVSRUZ WWHQ DSSURYDOR1 VKH & RP SDQ\ \$Q XQDXVIRUHQ DOHLDVRO IRWHU RU IDWVDFVRO R1 VKH FROHQW RU DSSHDDQFH R1 VKLV GRFXP HQWLV XQDZ IXDQD R1 HQGHU P D\ EH SURVHFVHG IR VKH IXQVWH (HQW R1 VKH QZ 8QWV R1 KHUZ W VIDIHG VKH UHVXW VKRZ Q D\ VKLV VHWUHSRUW UHQDQ. IR VKH VDP SH V VHVHG



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SECOS CORPORATION
8F, NO. 33, LANE 155, SEC. 3, BEI-SHEN RD., SHEN KENG DIST., NEW TAIPEI CITY, TAIWAN

CE/ 2014/ 72967B*

Test Item(s)	Unit	Method	MDL	Result
				No.1
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.
Monobromobiphenyl	mg/kg		5	n.d.
Dibromobiphenyl	mg/kg		5	n.d.
Tribromobiphenyl	mg/kg		5	n.d.
Tetrabromobiphenyl	mg/kg		5	n.d.
Pentabromobiphenyl	mg/kg		5	n.d.
Hexabromobiphenyl	mg/kg		5	n.d.
Heptabromobiphenyl	mg/kg		5	n.d.
Octabromobiphenyl	mg/kg		5	n.d.
Nonabromobiphenyl	mg/kg		5	n.d.
Decabromobiphenyl	mg/kg		5	n.d.
Sum of PBDEs	mg/kg		-	n.d.
Monobromodiphenyl ether	mg/kg		5	n.d.
Dibromodiphenyl ether	mg/kg		5	n.d.
Tribromodiphenyl ether	mg/kg		5	n.d.
Tetrabromodiphenyl ether	mg/kg		5	n.d.
Pentabromodiphenyl ether	mg/kg		5	n.d.
Hexabromodiphenyl ether	mg/kg		5	n.d.
Heptabromodiphenyl ether	mg/kg		5	n.d.
Octabromodiphenyl ether	mg/kg		5	n.d.
Nonabromodiphenyl ether	mg/kg		5	n.d.
Decabromodiphenyl ether	mg/kg		5	n.d.
AZO				
1): 4-AMINODIPHENYL (CAS No.: 92-67-1)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
2): BENZIDINE (CAS No.: 92-87-5)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
3): 4-CHLORO-O-TOLUIDINE (CAS No.: 95-69-2)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
4): 2-NAPHTHYLAMINE (CAS No.: 91-59-8)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
5): O-AMINOAZOTOLUENE (CAS No.: 97-56-3)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
6): 2-AMINO-4-NITROTOLUENE (CAS No.: 99-55-8)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHLDQ&ROGULROV R16HULFH SLUQVHG RYHLDHI DYDIDEQH RQ UHTXHWIRUDFFHVVEQH DWKWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGULROV DVS I DOG IRU HQHFWRQIE IRUP DW GRFXP HQW VXEIHFWR IR 7HIP V DOG &ROGULROV IRU (HFWRQIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGULROV 7HIP VH ' RFXP HQW DVS I \$WHQVRO LV GLDZ Q IR VKH QP WDWRO R1 QDEIQM IDGHP QULFEDNRO DOG IKLV GLEFVRO DVXHV GHUQHG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYD/HG VKDWIDIRLP DNRQ FROVIDIHG KHUHQ UHQFHW VKH & RP SDQ\ W IDGQVJ DVVKH VLP H R1 LW QWVUHQVRO ROQ DOG Z WKLQ VKH QP LW R1 FQHQWV IDVUQVRO U DO\ 7KH &RP SDQ\ W VRQ UHVSROVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRW H[ROHDIH SDUHV IR D YDQVDFVRO IRP H[HUFLDQ DQVKHWUJKV DOG REQDNRQV XQGHUVKH YDQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDOQRWEH UHSURGXFHG H[FHSW ID IXQ Z WKRXVSRUZ UWHQ DSSURYDOR I VKH &RP SDQ\ \$Q XQDXKRULJHG DOHLDNRQ IRWHU RU IDVUQVRO R1 VKH FROHQW RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXDQDQ R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHV[HQW R1 VKH QZ 8Q@V RIKHUZ W VIDIHG VKH UHXQV VKRZ Q D\ IKLV VHWUHSRUWUHQURQV IR VKH VDP SH V VHVHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
7): P-CHLOROANILINE (CAS No.: 106-47-8)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
8): 2,4-DIAMINOANISOLE (CAS No.: 615-05-4)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
9): 4,4'-DIAMINODIPHENYLMETHANE (CAS No.: 101-77-9)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
10): 3,3'-DICHLOROBENZIDINE (CAS No.: 91-94-1)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
11): 3,3'-DIMETHOXYBENZIDINE (CAS No.: 119-90-4)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
12): 3,3'-DIMETHYLBENZIDINE (CAS No.: 119-93-7)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
13): 3,3'-DIMETHYL-4,4'-DIAMINODIPHENYLMETHANE (CAS No.: 838-88-0)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
14): P-CRESIDINE (2-METHOXY-5-METHYLANILINE) (CAS No.: 120-71-8)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
15): 4,4'-METHYLENE-BIS-(2-CHLOROANILINE) (CAS No.: 101-14-4)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
16): 4,4'-OXYDIANILINE (CAS No.: 101-80-4)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
17): 4,4'-THIODIANILINE (CAS No.: 139-65-1)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
18): O-TOLUIDINE (CAS No.: 95-53-4)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
19): 2,4-TOLUYLENEDIAMINE (CAS No.: 95-80-7)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
20): 2,4,5-TRIMETHYLANILINE (CAS No.: 137-17-7)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
21): O-ANISIDINE (CAS No.: 90-04-0)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
22): 4-AMINOAZOBENZENE (CAS No.: 60-09-3)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR LW * HOHLDQ&ROGWLROV R16HULFH SUQVHG RYHLDHI DYDIDEGH RQ UHTXHVWIRUDDFFHVIEQH DWKWS. Z Z Z VJV FRP. HQ ZHIP V DOG &ROGWLROV DVS I DOG IRUHQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HIP V DOG &ROGWLROV IRU (HFVURQIE ' RFXP HQW DW KWS. Z Z Z VJV FRP. HQ ZHIP V DOG &ROGWLROV 7HIP VH ' RFXP HQW DVS I S\WHQVRO LV GLDZ Q IR VKH QP WDWRO R1 QDEIQM. IDGHP QULFEDNRO DQG IKLVGIFNRO DVXHV GHIDHG VKHUHO \$Q\ KRGHU R1 IKLV GRFXP HQWLV DGYD/HG VKDWDIRLP D\NRO FROVIDIDHG KHUHQ LHGHFW VKH & RP SDQ\ LV IDGILQV DWVKH V P R1 LW QWUHQWRO ROQ DOG Z UKIQ VKH QP LW R1 FQHQWV IDVIDFNRQ U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRW H\ROHDIH SDUHV IR D IUDQVDFNRQ IUP H\HFVLDQ DQVKHWUJKWV DOG REQJDNROV XQGHUVKH IUDQVDFNRQ GRFXP HQW 7KLV GRFXP HQW FDQRWEH UHSRGXFHG H\FHSHQ IXQ Z UKRXWSRUZ UMHQ DSSURYDOR I VKH & RP SDQ\ \$Q\ XQDXIKRULJHG DQHLNRO IRWHU RU IDQVDFNRQ R1 VKH FROHQWV RUDSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXQDQ R1HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHV\HQW R1 VKH QZ 8QWV RIKHUZ V\ VIDHG VKH UHVXOW V KRZ Q D\ IKLV VHWUHSRUWUHQURQ. IR VKH VDP SH V VHVHVG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
23): 2,4-XYLIDINE (CAS No.: 95-68-1)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
24): 2,6-XYLIDINE (CAS No.: 87-62-7)	mg/kg	With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.
HFCs (Hydrofluorocarbon)				
HFC-23 (CHF3) (CAS No.: 75-46-7)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-32 (CH2F2) (CAS No.: 75-10-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-41 (CH3F) (CAS No.: 593-53-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-43-10mee (C5H2F10)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-125 (C2HF5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-134 (C2H2F4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-134a (CH2FCF3) (CAS No.: 811-97-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-143 (CH3F3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-143a (CH3F3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-152a (C2H4F2) (CAS No.: 75-37-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV VVXHG E\ VKH & RP SDQ\ VXEIHFWR UV * HOHDO&ROGUVROV R16HULFH SUQVHG RYHLDI DYDIDEGH RQ UHTXHVWIRUDDFFHVIEGH DWKWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGUVROV DVS I DOG IRU HQHFWURQIE IRUP DW GRFXP HQW VXEIHFWR VR ZHIP V DOG &ROGUVROV IRU (HFVURQIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGUVROV ZHIP VH ' RFXP HQW DVS I S WHQVRO LV GLDZ Q VR VKH QP WDWRO R1 QDEIQM IQGHP QULFEDVRO DQG IKLV/GFVRO LVVXHV GHVQVHG VKHULHO \$Q\ KRGHU R1 IKLV GRFXP HQWLV DGYD/HG VKDWDIRLP DVRO FROVDIDHG KHUHQ LHGHFW VKH & RP SDQ\ LV IQGILQJV DWVKH VLP H R1 UV IQVHUYHQVRO ROQ DOG Z UKIQ VKH QP UV R1 FQHQVW GHVQVHG VKHULHO U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQMW LV VR UV & QHQW DOG IKLV GRFXP HQW GRHV QRWH (ROHLDVH SDUHV VR D VLDQVDFVRO IURP H (HFVLDQ DOVKHVLWJKVW DOG REQJDFVRO V XQGHUVKH VLDQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH UHSURGXFHG H (FHSW LD IXQ Z UKRXWSRUZ UWHQ DSSURYDOR I VKH & RP SDQ\ \$Q\ XQDXIKRULJHG DOHLDVRO IRWHU RU IDQVLEDFVRO R1 VKH FROHQW/RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXQDQG R1 HQGHUV P D\ EH SURVHFVHVG VR VKH IXQVWHV (VHQV R1 VKH QZ 8 QO VV RIKHUZ VV VIDIHG VKH UHVXOW V KRZ Q D\ IKLV VHVUHSRUWV HURQQ VR VKH VDP S Q V VHVHVG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
HFC-227ea (C3HF7) (CAS No.: 431-89-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-236fa (C3H2F6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-236ea (C3H2F6) (CAS No.: 431-63-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-245ca (C3H3F5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-245fa (C3H3F5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HFC-365mfc (C4H5F5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
PFCs (Perfluorocarbon)				
F14 (CAS No.: 75-73-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Fluorocarbon 116 (CAS No.: 76-16-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Freon 218 (CAS No.: 76-19-7)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Decafluorobutane (CAS No.: 355-25-9)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Freon C318 (CAS No.: 115-25-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Perfluor-1-butene (CAS No.: 357-26-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHDO&ROGWRQV R16H\YH SUQVHG RYHLDH1 DYDQDEH RQ UHTXHWIRUDFFHVVEQH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV DVS1 DOG IRUHQFWRQIE IRUP DW GRFXP HQW VXEIHFWR IR 7HIP V DOG &ROGWRQV IRU (HFWRQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV 7HIP VH ' RFXP HQW DVS1 \$WHQWRQ LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM IQGHP QULFEDWRQ DOG IKLVGIEWRQ LVXHV GHQVHG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWLQIRLP DWRO FROVDQHG KHUHQ UHQFWR VKH & RP SDQ\ W IQGQJLV DWVKH VLP H R1 LW IQWUHQWBQ ROQ DOG Z UKIQ VKH QP LW R1 FQHQWV IQWUHQWBQ U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQWGRHV QRWV FROHLDH SDUHV IR D YLQVDFWRQ IURP H HFUWQJ DQVKHWUJKWV DOG REQJDFWRQV XQGHUWKH YLQVDFWRQ GRFXP HQW 7KLV GRFXP HQWFDQRWEH UHSRGXFHG H FHSWQ IXQ Z UKRXWSRUV LWHQ DSSURYDOR1 VKH & RP SDQ\ \$Q XQDXKRULJHG DQHLWRQ IRWHU RU IDQWDFWRQ R1 VKH FROHQW RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXDQG R1HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHVHQWIR1 VKH QZ 8QWV RIKHUV LW VIDHG VKH UHVXQV KRZ Q IQ VKLV VHWUHSRUWUHQWQ IR VKH VDP SH V VHVHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
perfluorisobutene (CAS No.: 382-21-8)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
1,4-dihydrooctafluorobutane (CAS No.: 377-36-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Nonafluor-2- (trifluoromethyl) butane (CAS No.: 594-91-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Perfluoro-n-pentane (CAS No.: 678-26-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
2-perfluoromethylpentane (CAS No.: 355-04-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Perfluorohexane (CAS No.: 355-42-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
CFC's (Chlorofluorocarbons)				
Group I				
Chlorofluorocarbon-11 (CAS No.: 75-69-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-12 (CAS No.: 75-71-8)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-113 (CAS No.: 76-13-1)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-114 (CAS No.: 76-14-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-115 (CAS No.: 76-15-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHDO&ROGWRQV R16HULYH SUQVHG RYHLDH1 DYDIDEGH RQ UHTXHWIRUDFFHVVEQH DWKWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV DVS1 DOG IRU HQHFWROIE IRUP DW GRFXP HQW VXEIHFWR 7RHP V DOG &ROGWRQV IRU (HFVUROIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV 7RHP VH ' RFXP HQW DVS1 \$WHQVRO LV GLDZ Q IR VKH QP WDWRO R1 QDEIQM IQGHP QULFEDWRO DOG IKLV/GFVRO DVXHV GHVQHG VKHUHO \$Q KRGHU R1 IKLV GRFXP HQWLV DGYD/HG VKDWDIRLP DWRQ FROVDIDHG KHUHQ LHGHFW VKH & RP SDQ\ W IQGQVJY DWVKH VLP H R1 LW IQWU/HQWRO ROQ DOG Z UKIQ VKH QP LW R1 FQHQWV IQWU/FVRO U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV ORWH (ROHLDH SDUWV IR D VLDQVDFVRO IURP H (HFVUQJ DOVKHWLWJKV DOG REQJDFVRO XQGHUVKH VLDQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDOQRWEH UHSRGXFHG H (FHSW IQ XQD Z UKRXWSRZ LWVHQ DSSURYDOR1 VKH & RP SDQ\ \$Q XQDXIKRULJHG DOHLDWRO IRWHU RU IDWUFDWRO R1 VKH FROHQW/RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXODQG R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQWVWH (VHQW R1 VKH QZ 8QWV VIKKHUZ W VHVHG VKH UHVXW VKRZ Q IQWV VHWUHSRUWUHQWQ IR VKH VDP SOH V VHVHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
Group III				
Chlorofluorocarbon-13 (CAS No.: 75-72-9)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-111 (CAS No.: 354-56-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-112 (CAS No.: 76-12-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-211 (CAS No.: 422-78-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-212 (CAS No.: 3182-26-1)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-213 (CAS No.: 2354-06-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-214 (CAS No.: 29255-31-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-215 (CAS No.: 4259-43-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-216 (CAS No.: 661-97-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-217 (CAS No.: 422-86-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFCs (Hydrochlorofluorocarbons)				
HCFC-21 (CAS No.: 75-43-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHLDQ&ROGWLROV R16HULFH SUQVHG RYHLDHI DYDIDEGH RQ UHTXHVWIRUDFFHVVEQH DWKWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV DVS I DOG IRU HQHFWRQIE IRUP DW GRFXP HQWV VXEIHFWR IR 7HIP V DOG &ROGWLROV IRU (HQFWRQIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV 7HIP VH ' RFXP HQW DVS I \$WHQWRO LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM IDGHP QLEFWRQ DOG IKLV/GFWRQ LVXHV GHUHG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG VKDWIDIRLP DWRO FROVIDHG KHUHQ UHQFWR VKH & RP SDQ\ LV IDGLQV DWVKH VP H R1 LW QWUHQWRO ROQ DOG Z LWKQ VKH QP LW R1 FQHQWV IDWUQVIRQ U DO\ 7KH &RP SDQ\W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQWGRHV QRWH (ROHLDH SDUHV IR D WDOQDFWRQ IRP H (HFVLDQ DQVKWUWJKW DOG REQUWROV XQGHUWK WDOQDFWRQ GRFXP HQW 7KLV GRFXP HQWFDQRWEH UHSURGXFHG H (FHSWLD IXQ Z WKRXWSRUZ LWHQ DSSURYDOR I VKH &RP SDQ\ \$Q XQDXKRULJHG DOHLDWRO IRWHU RU IDWUQVIRQ R1 VKH FROHQW RU DSSHUQFH R1 IKLV GRFXP HQWLV XQDZ IXDQG R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWH (HQW R1 VKH QZ 8QWV R1KHUZ WU VIDIHG VKH UHVXOW VKRZ Q ID WU UHSRUWUHQURQ IR VKH VDP SH V WUWHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
HCFC-22 (CAS No.: 75-45-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-31 (CAS No.: 593-70-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-121 (CAS No.: 354-14-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-122 (CAS No.: 354-21-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-123 (CAS No.: 306-83-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-124 (CAS No.: 2837-89-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-131 (CAS No.: 359-28-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-132b (CAS No.: 1649-08-7)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-133a (CAS No.: 75-88-7)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-141b (CAS No.: 1717-00-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-142b (CAS No.: 75-68-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-221 (CAS No.: 422-26-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHDO&ROGUWROV R16HULFH SUQVHG RYHLDI DYDIDEQ RQ UHTXHWIRUDFFHVVEQH DWKWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV DVS I DOG IRU HQHFWURQIE IRUP DW GRFXP HQWV VXEIHFWR IR ZHIP V DOG &ROGUWROV IRU (QHFURQIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV ZHIP VH ' RFXP HQW DVS I S\WHQWRO LV GLDZ Q IR VKH QP WDWRO R1 QDEIQM IQGHP QULFEDWRO DOG IKLV GLEWRO DVXHV GHUQHG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDW IRUP DWRO FROVIDHG KHUHQ UHQFW VKH & RP SDQ\ W IQGILJV DWVKH VLP H R1 LW IQWUHQWRO ROQ DOG Z UKIQ VKH QP LW R1 FQHQWV IQWUHQWRO U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRW H\ROHDIH SDUHV IR D YDQVDFWRO IURP H\HFUWQJ DQVKHWUJKWV DOG REQUJWROV XQGHUWKH YDQVDFWRO GRFXP HQW 7KLV GRFXP HQW FDOQRWEH UHSURGXFHG H\FHSHQ IXQ Z UKRXWSRUZ UWHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXIKRULJHG DQHLWRO IRWHU RU IDWUJEDWRO R1 VKH FROHQW RU DSSHUHQFH R1 IKLV GRFXP HQWLV XQDZ IXODQG R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQWVH\HQWIR I VKH QZ 8QWV RIKHUZ W\ VIDIHG VKH UHVXOW VKRZ Q IQ IKLV VHWUHSRUWUHQWQ IR VKH YDP SOH V VHVHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
HCFC-222 (CAS No.: 422-49-1)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-223 (CAS No.: 422-52-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-224 (CAS No.: 422-54-8)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-225ca (CAS No.: 422-56-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-225cb (CAS No.: 507-55-1)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-226 (CAS No.: 431-87-8)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-231 (CAS No.: 421-94-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-232 (CAS No.: 460-89-9)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-233 (CAS No.: 7125-84-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-234 (CAS No.: 425-94-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-235 (CAS No.: 460-92-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-241 (CAS No.: 666-27-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHDO&ROGUWROV R16HULFH SUQVHG RYHLDI DYDIDEGH RQ UHTXHVWIRUDFFHVVEQH DWKWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV DVS I DOG IRU HQHFWROIE IRUP DW GRFXP HQWV VXEIHFWR IR ZHIP V DOG &ROGUWROV IRU (QHFUROI ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV ZHIP VH ' RFXP HQW DVS I S\WHQWRO LV GLDZ Q IR VKH QP WDWRO R1 QDEIQM IDGHP QULFEDWRO DOG IKLV GLEWRO DVXHV GHUQHG VKHUHO \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWIDIRLP DWRO FROVIDHGH KHUHQ UHQFW VKH & RP SDQ\ W IDGLQJV DWVKH VLP H R1 LW IDWUHQWRO ROQ DOG Z LWKQ VKH QP LW R1 FQHQWV IDWUQWRO U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRW H[ROHDIH SDUHV IR D WDOQDFWRO IURP H[HFWLQJ DQVKHULJKWV DOG REQUJWROV XQGHUWKH WDOQDFWRO GRFXP HQW 7KLV GRFXP HQW FDOQRWEH UHSURGXFHG H[FHSWLO IXQ Z WKRXWSRUZ WUHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXIKRULJHG DQHLWRO IRWHU RU IDWUQWRO R1 VKH FROHQW RU DSSHUQFH R1 IKLV GRFXP HQWLV XQDZ IXODQG R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQWVH[WHQWIR I VKH QZ 8QWV RIKHUZ W VHIDHG VKH UHVXOW VKRZ Q ID\ VKLV VHWUHSRUWUHQWQ IR VKH VDP SOH V VHVHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
HCFC-242 (CAS No.: 460-63-9)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-243 (CAS No.: 460-69-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-244	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-251 (CAS No.: 421-41-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-252 (CAS No.: 819-00-1)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-253 (CAS No.: 460-35-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-261 (CAS No.: 420-97-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-262 (CAS No.: 421-02-03)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HCFC-271 (CAS No.: 430-55-7)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFCs (Hydrobromofluorocarbons)				
HBFC-21B2 (CHBr ₂) (CAS No.: 1868-53-7)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-22B1 (CHF ₂ Br) (CAS No.: 1511-62-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHDO&ROGWRQV R16H\LFH SUIVHG RYHLDI DYDIDEG RQ UHTXHWIRUDFFHVIEQH DWKWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV DVS I DOG IRU HQHFWRQIE IRUP DW GRFXP HQW VXEIHFWR IR ZHIP V DOG &ROGWRQV IRU (HFWRQIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV ZHIP VH ' RFXP HQW DVS I S\HQWRQ LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM IQGHP QULFEDWRQ DOG IKLVGIFWRQ DVXHV GHIDHG VKHUHO \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWDIRLP DWRO FROVIDHG KHUHQ UHQFHW VKH & RP SDQ\W IQGILQV DWVKH VLP H R1 LW IQWUHQWBQ ROQ DOG Z UKIQ VKH QP LW R1 FQHQWV IQWUHQWBQ U DO\ 7KH & RP SDQ\W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQWGRHV QRWV[ROHDIH SDUHV IR D YDQVDFWRQ IURP H[HFWLQJ DQVKHWUJKWV DOG REQJEDWRQV XQGHVKH YDQVDFWRQ GRFXP HQW 7KLV GRFXP HQWFDQRWEH UHSRGXFHG H[FHSWQ IXQ Z UKRXWSRUZ UWHQ DSSURYDOR I VKH & RP SDQ\ SQ\ XQDXIKRULJHG DQHLWRQ IRWHU RU IDQWUHQWBQ R1 VKH FROHQW RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXQDQ R1HQGHUW P D\ EH SURVHFVHG IR VKH IXQWVH[WHQWIR I VKH QZ 8QWV RIKHUZ W\ VIDHG VKH UHVXQV KRZ Q IQ IKLV VHWUHSRUWUHQWQ IR VKH VDP SH V VHVHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
HBFC-31B1 (CH2FBr) (CAS No.: 373-52-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-121B4 (C2HFBr4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-122B3 (C2HF2Br3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-123B2 (C2HF3Br2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-124B1 (C2HF4Br)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-131B3 (C2H2FBr3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-132B2 (C2H2F2Br2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-133B1 (C2H2F3Br)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-141B2 (C2H3FBr2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-142B1 (C2H3F2Br)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-151B1 (C2H4FBr)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-221B6 (C3HFBr6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHDO&ROGUWROV R16HULFH SUQVHG RYHLDI DYDIDEGH RQ UHTXHWIRUDFFHVVEQH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV DVS I DOG IRU HQHFWURQIE IRUP DW GRFXP HQWV VXEIHFWR VR ZHIP V DOG &ROGUWROV IRU (HFVURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV ZHIP VH ' RFXP HQW DVS I S\WHQWRO LV GLDZ Q VR VKH QP WDWRO R1 QDEIQM IDGHP QULFEDWRO DOG IKLV GLEWRO DVXHV GHUQHG VKHUHO \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWIDIRLP DWRO FROVIDHG KHUHQ UHGHFW VKH & RP SDQ\ W IDGLQJV DWVKH VLP H R1 LW QWUHQWRO ROQ DOG Z LWKQ VKH QP LW R1 FQHQWV IDWVDFWRO U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV VR LW & QHQW DOG IKLV GRFXP HQW GRHV QRW H[ROHDIH SDUHV VR D WDOQDFWRO IURP H[HFWLQJ DQVKHWLWJKWV DOG REQUJWROV XQGHUVKH WDOQDFWRO GRFXP HQW 7KLV GRFXP HQW FDOQRWEH UHSURGXFHG H[FHSWLO IXQ Z WKRXWSRUZ UWHQ DSSURYDOR I VKH & RP SDQ\ SQ\ XQDXWKRLJHG DQHLWRO IRWHU RU IDWVDFWRO R1 VKH FROHQW RU DSSHUQFH R1 IKLV GRFXP HQWLV XQDZ IXODQG R1 HQGHUW P D\ EH SURVHFVHG VR VKH IXQWVH[WHQW R1 VKH QZ 8QWV R1KHUZ W\ VIDHG VKH UHVXOW VKRZ Q D\ IKLV VHWUHSRUWUHQWQ VR VKH VDP SQ V VHVHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
HBFC-222B5 (C3HF2Br5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-223B4 (C3HF3Br4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-224B3 (C3HF4Br3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-225B2 (C3HF5Br2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-226B1 (C3HF6Br)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-231B5 (C3H2FBr5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-232B4 (C3H2F2Br4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-233B3 (C3H2F3Br3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-234B2 (C3H2F4Br2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-235B1 (C3H2F5Br)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-241B4 (C3H3FBr4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-242B3 (C3H3F2Br3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHLDQ&ROGWRQV R16H\UHF SUQVHG RYHLDI DYDIDEGH RQ UHTXHVWIRUDFFHVVEQH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV DVS I DOG IRU HQHFWRQIE IRUP DW GRFXP HQWV VXEIHFWR IR 7HIP V DOG &ROGWRQV IRU (HFWRQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV 7HIP VH ' RFXP HQW DVS I S\WHQWRQ LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM IDGHP QULFQWRQ DOG IKLVGIFWRQ DVXHV GHUHQG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWIDIRLP DWBQ FROVIDIHG KHUHQ UHQFHW VKH & RP SDQ\ W IDGLQJV DWVKH VLP H R1 LW IDWUHQWRQ ROQ DOG Z LWKQ VKH QP LW R1 FQHQWV IDWUHQWRQ U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQWGRHV QRW H[ROHDIH SDUHQV IR D YLDOQDFWRQ IURP H[HUFLDQ DQVKHWUJWKV DOG REQJDFWRQV XQGHUWKH YLDOQDFWRQ GRFXP HQW 7KLV GRFXP HQWFDQRWEH UHSURGXFHG H[FHSWLD IXQ Z WKRXWSRUV UWHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXWKRLJHG DQHLQWRQ IRWHU RU IDWUHQWRQ R1 VKH FROHQW RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXDQDG R1HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWH[HQWIR I VKH QZ 8QHQV RIKHUZ LW VIDVHG VKH UHVXQV VKRZ Q ID\ VKLV VHWUHSRUWUHQURQV IR VKH YDP SOH V VHVVHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
HBFC-243B2 (C3H3F3Br2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-244B1 (C3H3F4Br)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-251B3 (C3H4FBr3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-252B2 (C3H4F2Br2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-253B1 (C3H4F3Br)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-261B2 (C3H5FBr2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-262B1 (C3H5F2Br)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
HBFC-271B1 (C3H6FBr)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
CHCs (Chlorinate hydrocarbon)				
1,1,1,2-Tetrachloroethane (CAS No.: 630-20-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
1,1,1-Trichloroethane (CAS No.: 71-55-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
1,1,2,2-Tetrachloroethane (CAS No.: 79-34-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
1,1,2-Trichloroethane (CAS No.: 79-00-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHLDQ&ROGWRQV R16H\UHF SUIVHG RYHLDI DYDIDEG RQ UHTXHWIRUDFFHVIEQH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV DVS I DOG IRUHQFWRQIE IRUP DW GRFXP HQWV VXEIHFWR 7HIP V DOG &ROGWRQV IRU (HFWRQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV 7HIP VH ' RFXP HQW DVS I \$WHQWRQ LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM IQGHP QULFEDWRQ DOG IKLVGIEWRQ LVXHV GHUHQG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWIDIRLP DWRO FROVIDHG KHUHQ UHQFWR VKH & RP SDQ\ W IQGILQV DWVKH VP H R1 LW IQWUHQWQBQ ROQ DOG Z UKIQ VKH QP LW R1 FQHQWV IQWUHQWQBQ U DO\ 7KH &RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQWGRHV QRWIRQHUHQ SDUHQV IR D YLDOVDFWRQ IUP H HFUHQWJ DQVKHWUJKWV DOG REQUJWRQV XQGHUWKH YLDOVDFWRQ GRFXP HQW 7KLV GRFXP HQWFDQRWEH UHSRGXFHG H FHSW IQ IXQ Z UKRXW SURZ UWHQ DSSURYDOR I VKH &RP SDQ\ \$Q XQDXIKRULJHG DQHUHQW IRWHU RU IDWUHQWQBQ R1 VKH FROHQW RU DSSHUHQFH R1 IKLV GRFXP HQWLV XQDZ IXDQDQ R1HQGHUW P D\ EH SURVHFVHQ IR VKH IXQWVHQVHQWIR I VKH QZ 8QHQVV RIKHUZ WU VIDIHG VKH UHVXQV VKRZ Q IQ IKLV VHWUHQWUHQWUHQWQ IR VKH VDF SDH V VHWVHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
1,1-Dichloroethane (CAS No.: 75-34-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
1,1-Dichloroethene (CAS No.: 75-35-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
1,1-Dichloropropene (CAS No.: 563-58-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
1,2,3-Trichloropropane (CAS No.: 96-18-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
1,2-Dichloroethane (CAS No.: 107-06-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
1,2-Dichloropropane (CAS No.: 78-87-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
1,3-Dichloropropane (CAS No.: 142-28-9)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
2,2-Dichloropropane (CAS No.: 594-20-7)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Carbon tetrachloride (CAS No.: 56-23-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chloroethane (CAS No.: 75-00-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chloroform (CAS No.: 67-66-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chloromethane (CAS No.: 74-87-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHLDQ&ROGWRQV R1 6HVLPH SUQVHG RYHLDI DYDIDEG RQ UHTXHWIRUDFFHVIEQH DWKWS ZZZ VJV FRP HQ ZHIP V DOG & ROGWRQV DVS I DOG IRU HQFWRQIE IRUP DN GRFXP HQWV VXEIHFWR 7HIP V DOG & ROGWRQV IRU (HQFWRQIE ' RFXP HQW DW KWS ZZZ VJV FRP HQ ZHIP V DOG & ROGWRQV 7HIP VH ' RFXP HQW DVS I SWHQWRQ LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM IDGHP QULFEDWRQ DOG IKLV GLEWRQ LVXHV GHIDHG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWIDIRLP DWBQ FROVIDHG KHUHQ UHQFWR VKH & RP SDQ\ W IDGIDJV DWVKH VLP H R1 LW IDWUHQWRQ ROQ DOG Z LWKQ VKH QP LW R1 FQHQWV IDWUHQWRQ U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRWH FROHDIH SDUHQV IR D YLQVDFWRQ IUP H HUFVLDQ DQVKHWLWJKWV DOG REQJDFWRQV XQGHUWKH YLQVDFWRQ GRFXP HQW 7KLV GRFXP HQW FDOQRWEH UHSRGXFHG H FHSWLD IXQ Z WKRXWSRUBZ UWHQ DSSURYDOR I VKH & RP SDQ\ SQ\ XQDXIKRLLHG DQHLWRQ IRWHU RU IDWUHQWRQ R1 VKH FROHQW RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXODQG R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHVHQW R1 VKH QZ 8QHQVV RIKHUZ WU VIDVHG VKH UHVXQV VKRZ Q ID\ IKLV VHWUHSRUWUHQURQV IR VKH YDP SQH V VHVVHG



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CE/ 2014/ 72967B*

Test Item(s)	Unit	Method	MDL	Result
				No.1
cis-1,2-Dichloroethene (CAS No.: 156-59-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
cis-1,3-Dichloropropene (CAS No.: 10061-01-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hexachlorobutadiene (CAS No.: 87-68-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Methylene Chloride (CAS No.: 75-09-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Tetrachloroethene (CAS No.: 127-18-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
trans-1,2-Dichloroethene (CAS No.: 156-60-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
trans-1,3-Dichloropropene (CAS No.: 10061-02-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Trichloroethylene (CAS No.: 79-01-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Halogen				
Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg		50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg		50	n.d.
Halogen-Iodine (I) (CAS No.: 14362-44-8)	mg/kg		50	n.d.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHDO&ROGWRQV R1 6H\U\H SUQVHG RYHLDI DYDIDEH RQ UHTXHWIRUDFFHVVEH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV DVS I DOG IRU HQHFWRQIE IRUP DW GRFXP HQW VXEIHFWR IR ZHIP V DOG &ROGWRQV IRU (HQFWRQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV ZHIP VH ' RFXP HQW DVS I \$WHQWRQ LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM IDGHP QLEFWRQ DOG IKLV GLEWRQ LVXHV GHUHG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDWIRP DWBQ FROVDIDHG KHUHQ UHQFW VKH & RP SDQ\ W IDGLQV DWVKH VLP H R1 LW QWU\HQWRQ ROQ DOG Z LWLQ VKH QP LW R1 FQHQW\ IDVU\FKWRQ U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRW H\ROHDIH SDUHV IR D WDOQDFWRQ IRP H\HFUWQJ DQVKHWUJKWV DOG REQUJWRQV XQGHUWKH WDOQDFWRQ GRFXP HQW 7KLV GRFXP HQW FDOQRWEH UHSURGXFHG H\FHSWLD IXQ Z WKRXW SURUZ WUHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXWKRUJHG DQHLWRQ IRWHU RU IDWUJWRQ R1 VKH FROHQW RU DSSHDOQFH R1 IKLV GRFXP HQWLV XQDZ IXDQDQ R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQWV\H\HQW R1 VKH QZ 8QWV RIKHUZ W\ VIDIHG VKH UHVXQV KRZ Q D\ IKLV VHWUHSRUWU\HQWQ\ IR VKH VDP SQH V\ VHVHG



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Test Item(s)	Unit	Method	MDL	Result
				No.1
Polynuclear Aromatic Hydrocarbons (PAHs)				
Acenaphthene (CAS No.: 83-32-9)	mg/kg	With reference to ZLS standard ZEK 01.4-08 method. Analysis was performed by GC/MS.	0.2	n.d.
Acenaphthylene (CAS No.: 208-96-8)	mg/kg		0.2	n.d.
Anthracene (CAS No.: 120-12-7)	mg/kg		0.2	n.d.
Benzo[a]anthracene (CAS No.: 56-55-3)	mg/kg		0.2	n.d.
Benzo[a]pyrene (CAS No.: 50-32-2)	mg/kg		0.2	n.d.
Benzo[b]fluoranthene (CAS No.: 205-99-2)	mg/kg		0.2	n.d.
Benzo[g,h,i]perylene (CAS No.: 191-24-2)	mg/kg		0.2	n.d.
Benzo[k]fluoranthene (CAS No.: 207-08-9)	mg/kg		0.2	n.d.
Chrysene (CAS No.: 218-01-9)	mg/kg		0.2	n.d.
Dibenzo[a,h]anthracene (CAS No.: 53-70-3)	mg/kg		0.2	n.d.
Fluoranthene (CAS No.: 206-44-0)	mg/kg		0.2	n.d.
Fluorene (CAS No.: 86-73-7)	mg/kg		0.2	n.d.
Indeno[1,2,3-c,d] pyrene (CAS No.: 193-39-5)	mg/kg		0.2	n.d.
Naphthalene (CAS No.: 91-20-3)	mg/kg		0.2	n.d.
Phenanthrene (CAS No.: 85-01-8)	mg/kg		0.2	n.d.
Pyrene (CAS No.: 129-00-0)	mg/kg		0.2	n.d.
Benzo[j]fluoranthene (CAS No.: 205-82-3)	mg/kg		0.2	n.d.
Benzo[e]pyrene (CAS No.: 192-97-2)	mg/kg		0.2	n.d.
Sum of 18 PAHs	mg/kg	-	n.d.	

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR LW * HOHDO&ROGWLROV R1 6H\U\H SUQVHG RYHUHDI DYDIDEG RQ UHTXHVWIRUDFFHVVEOH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV DVS I DOG IRU HQHFWRQIE IRUP DW GRFXP HQWV VXEIHFWR IR ZHIP V DOG &ROGWLROV IRU (QHFWRQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV ZHIP VH ' RFXP HQW DVS I S\HQWLRO LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM IDGHP QULFEDWBQ DOG IKLV/GFVWBQ DVXHV GHUHG VKHUHO \$Q\ KRGHU R1 IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DWBQ FROVIDHG KHUHQ UHQFW VKH & RP SDQ\ W IDGILQV DWVKH VLP H R1 LW QWU\HQWBQ ROQ DOG Z LWLQ VKH QP LW R1 FQHQWV IDVU\FWBQ U DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRW\ (ROHDIH SDUHV IR D VUDQVDFWBQ IRP H\HFU\QJ DQVKHW\UJKW DOG REQJDFWBQ XQGHUVKH VUDQVDFWBQ GRFXP HQW 7KLV GRFXP HQW FDOQRWEH UHSURGXFHG H\FHSWLD IXQ Z WKRXW\SRUZ UWHQ DSSURYDOR I VKH & RP SDQ\ \$Q\ XQDXIKR\UHG DOHLDWBQ IRWHU RU IDVU\DFWBQ R1 VKH FROHQW RU DSSHLDQFH R1 IKLV GRFXP HQWLV XQDZ IXDQG R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQ\WV\HQW R1 VKH QZ 8Q\WV RIKHUZ W\ VIDIHG VKH UHVXQV VKRZ Q ID\ VKLV VHWUHSRUW\HURQQ IR VKH VDP SQ V VHVHG

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Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated
5. ** = Qualitative analysis (No Unit)
6. Negative = Undetectable / Positive = Detectable
7. Testing range of asbestos qualitative analysis is from less than 0.1% to 100%. The judgment criterion: asbestos fibers being found is shown as "Positive"; asbestos fibers not being found is shown as "Negative".
8. ***: The substance was calculated by the test results of Arsenic, Boron or Beryllium respectively. The MDL was evaluated for Arsenic, Boron or Beryllium respectively.
9. Parameter Conversion Table : Please refer to http://twap.sgs.com/sgsrsts/chn/download-REACH_tw.asp
10. (*2): Tetraboron disodium heptaoxide, hydrate: Only anhydrous form of disodium tetraborate is relevant and considered according to ECHA explanation (Ref no.: INC 000000032519).
11. Since beryllium copper is a metal alloy of copper and beryllium and the test result is n.d. for beryllium, we can have conclusion that the beryllium copper is n.d..

PFOS Reference Information : POPs - (EU) 757/2010

Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above 1µg/m².

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGUWROV R16HLYFH SUQVHG RYHLDHI DYDIDEGH RQ UHTXHWIRUDFFHVHVEQH DWKWS Z Z Z VJV FRP HQ ZHIP V DQG &ROGUWROV DVSI
DQG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR ZHIP V DQG &ROGUWROV IRU (HQFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DQG &ROGUWROV ZHIP VH ' RFXP HQW DVSI S WHQWRO LV
GLDZ Q IR VKH QP WDWRO R1 QDEIQM IDGHP QULFEDWRO DQG IKLV GLEWRO DVXHV GHUHG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG WKDW IRUP DWRO FROVIDHG KHUHQ UHQFW VKH & RP SDQ\ W
IDGIDV DWVKH VLP H R1 LW QWUHQWRO ROQ DQG Z LWLQ VKH QP LW R1 FQHQWLV IDWUWVWRO U DO\ 7KH & RP SDQ\ W VROH UHVSROVIEQW LV IR LW & QHQW DQG IKLV GRFXP HQW GRHV ORWH FROHDIH SDUWV
IR D WLDQVDFWRO IURP H [HFVLWJ DQWKWLVWJKWV DQG REQUEDWROV XQGHUVKH WLDQVDFWRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH UHSURGXFHG H [FHSW LQ IXQ Z WKRXW SURZ WUHQ DSSURYDOR I VKH
& RP SDQ\ \$Q XQDXWKRLJHG DQWUWRO IRWHU RU IDWUWVWRO R1 VKH FROHQW RU DSSHUHQFH R1 IKLV GRFXP HQW LV XQDZ IXQDQ R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQWVH [VHQW R1 VKH QZ
8 QWV R1 KHUZ WU WIDHG VKH UHVXOW VKRZ Q D\ IKLV WUWUHSRUWUHQWQ IR VKH VDP SH V WUWUHG



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Reference information for PAHs:

Requirement of ZEK 01.4-08 : Restraining maximum values for products

Parameter	Category 1	Category 2	Category 3
	Material indented to be put in the mouth or toys for children aged < 36 months with intended skin contact.	Materials not falling under category 1 with foreseeable contact to skin for longer than 30 seconds (long-term skin contact).	Materials not falling under category 1 or 2 with foreseeable contact to skin for less than 30 seconds (short-term skin contact).
Benzo[a]pyrene (mg/kg)	<MDL (<0.2)**	1	20
Sum of 18 PAH (mg/kg)*	<MDL (<0.2)**	10	200

Remark :

* = Only PAH substances >0.2 mg/kg are taken into account while calculating the sum of PAHs

** = If the limits of category 1 are surpassed but the limits of category 2 still met, the confirmation of suitability of contact with foodstuff or the oral mucosa can be verified by an additional specific migration test of the PAH components according to EN 1186 ff. and § 64 LFBG 80.30-1. The results of the migration test shall be evaluated according to law criteria for foodstuff.

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHDO&ROGUWROV R1 6H\UHF SUQVHG RYH\UHD1 DYDIDEGH RQ UHTXHWWRUDFFHVVIEGH DWK\WS Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV DVSI
 DOG IRU HQHFWRQIE IRUP DW GRFXP HQWV VXEIHFWR 7HIP V DOG &ROGUWROV IRU (OHFWRQIE ' RFXP HQW DW K\WS Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV 7HIP VH ' RFXP HQW DVSI S\WHQWRO LV
 GLDZ Q IR VKH QP WDWRO R1 QDEIQM IQGHP QULFEDWRO DOG IKLV GLEWRO LVVXHV GHUHQH V\K\UHQ \$Q\ KRGHU R1 IKLV GRFXP HQWLV DGWVHG WKDWIDIRLP DWRO FROVIDHGH KHUHQ UHGHFW VKH & RP SDQ\ W
 IQGILQV DWVKH VLP H R1 LW IQWUHQWRO ROQ DOG Z LWLQ VKH QP LW R1 FQHQWLV IQWUHQWRO U DO\ 7KH & RP SDQ\ W VRGH UHVSROVIEQW LV IR LW & QHQWDOG IKLV GRFXP HQWGRHV QRWH\ FROHDIH SDUHV
 VR D WDOQVDFWRO IURP H\HFUWVQ DOVKHWUWJKWV DOG REQUWROV XQGHUWKH WDOQVDFWRO GRFXP HQW 7KLV GRFXP HQWFDQQRWEH UHSURGXFHG H\FHFWLQ IXQ Z WKRXWSDUW LWVHQ DSSURYDOR1 VKH
 & RP SDQ\ \$Q\ XQDXIKRULJHG DOHLDWRO IRW\H\U RU IDWUWEDWRO R1 VKH FROHQW RU DSSHUHQFH R1 WKLV GRFXP HQWLV XQDZ IXODQG R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQWVWH\HQWRI VKH QZ
 8QWV R1KHUZ LVH VIDVHG VKH UHVXQV KRZ Q IQWLV VHWUHSRUWUHQWRO IR VKH VDP SH V VHVVHG

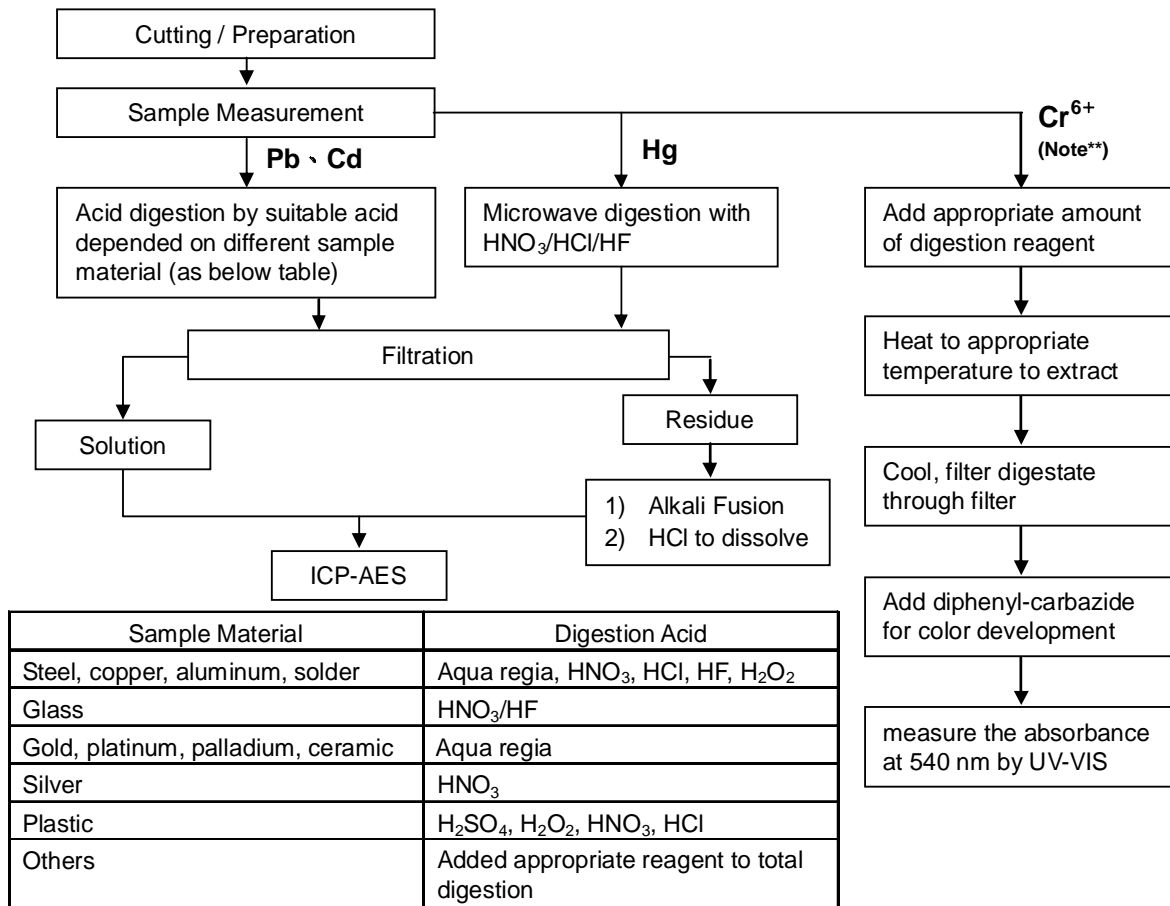
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CE/ 2014/ 72967B*

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note (For IEC 62321)**

- (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95 °C.
- (2) For metallic material, add pure water and heat to boiling.

Test Report

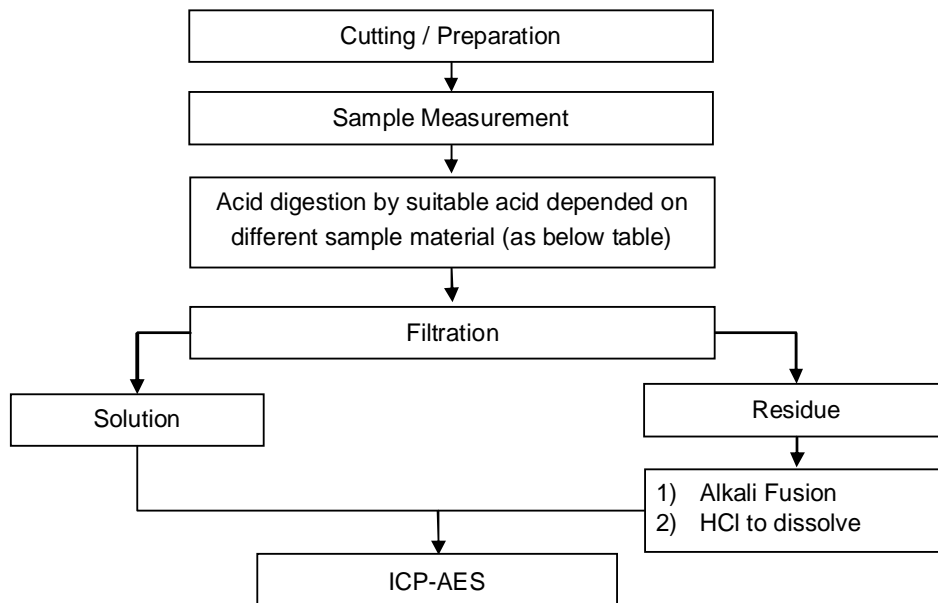
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CE/ 2014/ 72967B*

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

Flow Chart of digestion for the elements analysis performed by ICP-AES



Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
Others	Added appropriate reagent to total digestion

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWRU LW * HOHDO&ROGWRQV R16HLYFH SUQVHG RYHLDHI DYDIDEGH RQ UHTXHVWIRUDFFHVVEQH DWKWS ZZZ VJV FRP HQ ZHIP V DOG &ROGWRQV DVS [DOG IRU HQFWRQIE IRUP DW GRFXP HQWV VXEIHFWRU R16HLYFH SUQVHG RYHLDHI DYDIDEGH RQ UHTXHVWIRUDFFHVVEQH DWKWS ZZZ VJV FRP HQ ZHIP V DOG &ROGWRQV DVS [RFXP HQWV DW KWS ZZZ VJV FRP HQ ZHIP V DOG &ROGWRQV ZHIP VH * RFXP HQWV DVS [SWHQWRQ LV GLDZ Q IR VKH QP WDWBQ R1 QDEIQM IDGHP QULFEDWRQ DOG IKLV GLEWRQ DVXHV GHUHG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGWVHG WKDQIRLP DWBQ FROVDIDHG KHLHQ LHGHFW VKH & RP SDQ\ W IDGGLQV DWVKH VLP H R1 LW QWVHQWQRO DOG DOG Z LWKQ VKH QP LW R1 FQHQWV IDVWVFKV R1 DO\ 7KH & RP SDQ\ W VRQ HVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQWGRHV QRWV [ROHLDVH SDUHV IR D VLDQVDFWRQ IUP H [HFVWQV DQVKWLVWJKV DOG REQVDFWRQV XQGHUVKH VLDQVDFWRQ GRFXP HQW 7KLV GRFXP HQW FDQRWEH LHSURGXFHG H [FHSWQ IXQ Z WKRXWSRUZ LWHQ DSSURYDOR1 VKH & RP SDQ\ \$Q XQDXKRQVHG DQHLWRQ IRWHU RU IDVWVFKV R1 VKH FROHQW RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXDQD R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWH [VHQW R1 VKH QZ 8QWV R1KHUZ LV VIDIHG VKH LHVXQV KRZ Q DQ VKLV VHWLHSRUWV HURQV IR VKH VDP SQ V VHVHG

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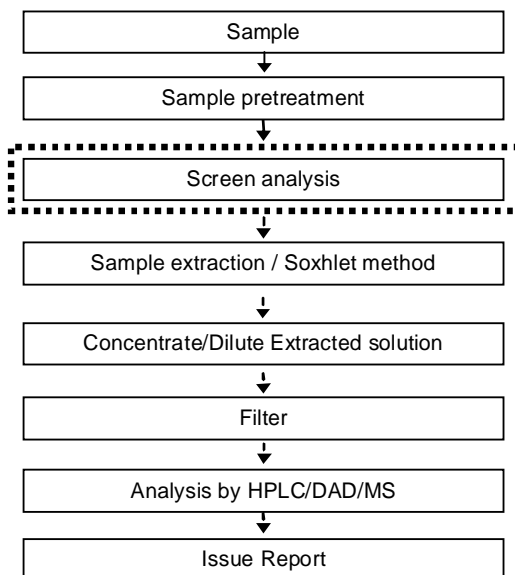
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CE/ 2014/ 72967B*

TBBP-A-bis analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

First testing process ———→
Optional screen process
Confirmation process - . - . →



Test Report

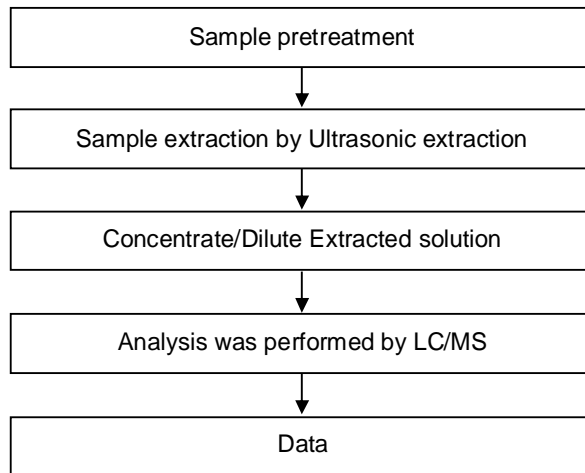
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TBBP-A analytical flow chart

- Name of the person who made measurement: Roy Lin
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWLROV R I 6H\YLH SLQVHG RYHUHDI DYDQDEQ RQ UHTXHWIRUDFFHVVEQH DWKWS Z Z Z VJV FRP HQ ZHIP V DQG &ROGWLROV DVS [DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HIP V DQG &ROGWLROV IRU (HQFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DQG &ROGWLROV 7HIP VH ' RFXP HQW DVS ' SWHQWRO LV GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDWRO DQG IKLV GLEWRO LVVXHV GHUHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG WKDW IRUP DWRO FROVDIDHG KKHRO UHQFW VKH & RP SDQ\ W IQGILQV DWVKH VLP H R I LW IQWUHQWRO ROQ DQG Z LWKQ VKH QP UW R I FQHQWLV IDQVDFWRO U DO\ 7KH & RP SDQ\ W VRQ LHVSRQWIEQW LV IR LW & QHQW DQG IKLV GRFXP HQW GRHV QRW H [ROHDIH SDUWV IR D WLDQVDFWRO IUP H [HFVLQJ DQVKHWLWJKWV DQG REQJDFWRO XQGHUWKH WLDQVDFWRO GRFXP HQW 7KLV GRFXP HQW FDQQRWIEH LHSURGXFHG H [FHSWQ IXQ Z WKRXW SURZ WWHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXIKRULJHG DQWLDWRO IRWUHQ RU IDQWDFWRO R I VKH FROHQW RU DSSHUHQFH R I IKLV GRFXP HQWLV XQDZ IXODQG R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQWVWH [VHQW R I VKH QZ 8 Q@VV RIKHUZ W VH VDHG VKH LHVXQV VKRZ Q Q IKLV VHWLHSRUWUHQHQQ IR VKH VDP SH V VHVHG

Test Report

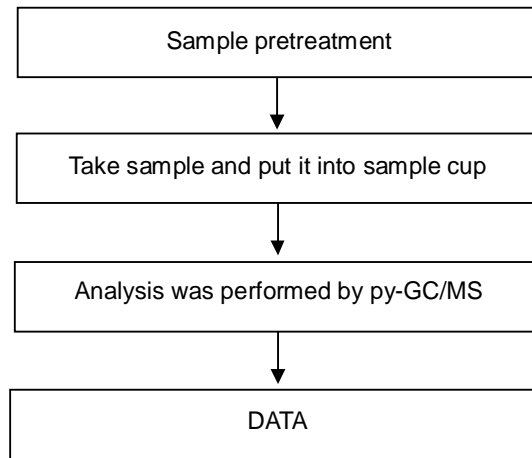
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CE/ 2014/ 72967B*

Analytical flow chart of Red phosphorus

- Name of the person who made measurement: Roy Lin
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWLROV R I 6H\YLH SLQVHG RYHLDH I DYDQDEH RQ UHTXHWIRUDFFHVIEQH DWKWS Z Z Z VJV FRP HQ 7HLP V DQG &ROGWLROV DVS I
DQG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HLP V DQG &ROGWLROV IRU (HQFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ 7HLP V DQG &ROGWLROV 7HLP VH ' RFXP HQW DVS I \$WHQVRO LV
GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDVRO DQG IKLV GLEVRO LVVXHV GHVHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DVRO FROVDIDHG KKHRO LHGHFW VKH & RP SDQ\ LV
IQGILQV DWVKH VLP H R I LW IQVHUYHQVRO ROQ DQG Z LWLQ VKH QP UW R I FQHQVW IQVHUYHQVRO U DO\ 7KH & RP SDQ\W VRQ LHVSRQVIEQW LV IR LW & QHQW DQG IKLV GRFXP HQWGRHV QRWH IROHDIH SDUWV
VR D VLDQVDFVRO IURP H I HFWLVQJ DQVKHWLWJWKV DQG REQJDFVRO XQGHUVKH VLDQVDFVRO GRFXP HQW 7KLV GRFXP HQWFDQQRWEH LHSURGXFHG H I FHSWQ IXQ Z WKRXW SURU WWHQ DSSURYDOR I VKH
& RP SDQ\ \$Q XQDXIKRULJHG DQVHLDVRO IRWHU RU IDQVDFVRO R I VKH FROVHQW RU DSSHLDQFH R I IKLV GRFXP HQWLV XQDZ IXQDQG R I HQGHUW P D\ EH SURVHFVXVHG IR VKH IXQVWHV I HQW R I VKH QZ
8Q@VV RIKHUZ LV VIDIHG VKH LHVXQV KRZ Q Q IKLV VHWLHSRUWUHURQQ IR VKH VDP SQH V VHVHG

Test Report

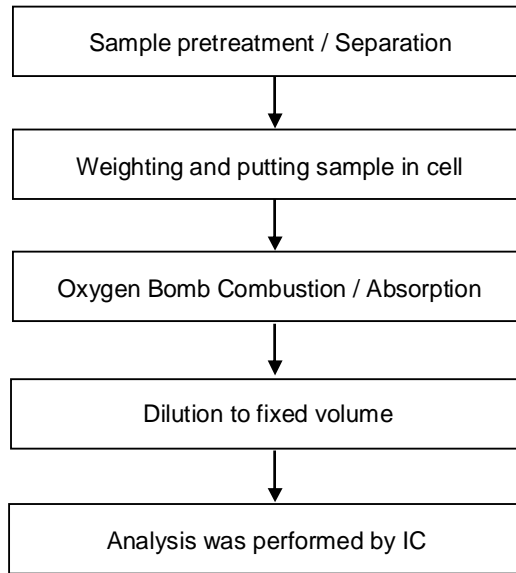
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CE/ 2014/ 72967B*

Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHDO&ROGWLROV R1 6HLYLH SLQVHG RYHUHDI DYDIDEGH RQ UHTXHWIRUDFFHVVIEGH DWKWS . Z Z Z VJV FRP HQ 7HLP V DOG &ROGWLROV DVSI
 DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HLP V DOG &ROGWLROV IRU (HQFWURQIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ 7HLP V DOG &ROGWLROV 7HLP VH ' RFXP HQW DVSI ' SWHQWLRO LV
 GLDZ Q IR VKH QP WDWBQ R1 QDEIQM IQGHP QULFEDWRO DOG IKLV GLEWRO LVVXHV GHIDHG VKHUHQ \$Q\ KRGHU R1 IKLV GRFXP HQWLV DGWLVHG VKDWLQIRLP DWLRO FROVIDIDHG KHLHRO UHQFW VKH & RP SDQ\ W
 IQGILQV DWVKH VLP H R1 LW IQWLVHQWRO ROQ DOG Z UKLQ VKH QP UW R1 FQHQWLV IQWLVFKWRO U DO\ 7KH &RP SDQ\ W VRGH LHVSRQVIEQW LV IR UW & QHQW DOG IKLV GRFXP HQW GRHV QRWH FROHDIH SDUWV
 VR D VLDQVDFWRO IURP H [HFWLVQJ DQVKHWLWJ KWV DOG REQJEDWROV XQGHUVKH VLDQVDFWRO GRFXP HQW 7KLV GRFXP HQW FDQQRWIEH LHSURGXFHG H [FHSWQ IXQ Z UKRXW SURUZ UWHQ DSSURYDOR I VKH
 &RP SDQ\ \$Q\ XQDXIKRLLJHG DQHLWRO IRWHU RU IDQWLFEDWRO R1 VKH FROVHQW RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXQDQG R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQWVWH [VHQW R1 VKH QZ
 8 Q@VV RIKHUZ WLV VIDIHG VKH LHVXQV VKRZ Q Q\ VKLV VHWLHSRUWLV HURQO\ IR VKH VDP SQH V VHVVHG

Test Report

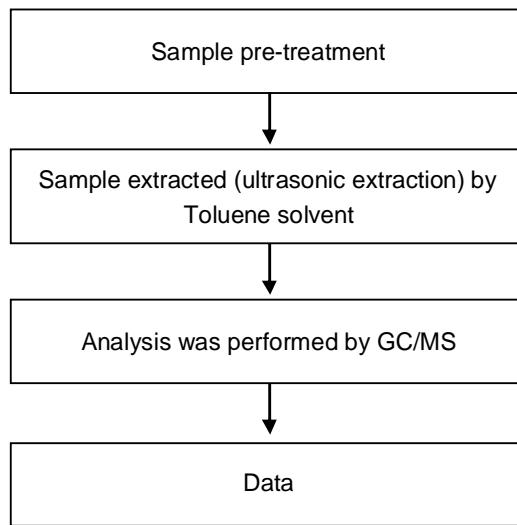
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CE/ 2014/ 72967B*

PAHs (Polynuclear Aromatic Hydrocarbons) analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHDO&ROGWRQV R I 6HLYLH SLQVHG RYHUHDI DYDQDEQ RQ UHTXHVWV RUDFFHVVEQH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV DVS [DOG IRU HQFWRQIE IRUP DW GRFXP HQWV VXEIHFWR 7HIP V DOG &ROGWRQV IRU (HQFWRQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV 7HIP VH ' RFXP HQW DVS ' SWHQWRQ LV GLDZ Q IR VKH QP WDWBQ R I QDEIQM IQGHP QULFQWRQ DOG IKLV GLEWRQ LVVXHV GHUHQG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGWLVHG VKDWDIRLP DWBQ FROVDIDHG KHUHQ UHQFW VKH & RP SDQ LV IQGILQV DWVKH VLP H R I LW IQWUHQWRQ ROQ DOG Z UKIQ VKH QP UW R I FQHQWLV IQDQVWRQ U DO\ 7KH & RP SDQ\W VRQ LHVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRWH [ROHUVH SDUHQV IR D VLDQVDFWRQ IURP H [HFVLQJ DQVKHWLWJKWV DOG REQDWRQV XQGHUVKH VLDQVDFWRQ GRFXP HQW 7KLV GRFXP HQW FDQRWEH LHSURGXFHG H [FHSW IQ XQD Z UKRXWSURUZ UWHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXIKRULJHG DQHLQWRQ IRWHU RU IDQVDFWRQ R I VKH FROHQW RU DSSHUHQFH R I IKLV GRFXP HQWLV XQDZ IXODQG R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQVWH [VHQW R I VKH QZ 8 Q@VV RIKHUZ LV VIDIHG VKH LHVXQV VKRZ Q IQ VKLV VHWLHSRUWUHQHQ IR VKH VDP SQH V VHVHG

Test Report

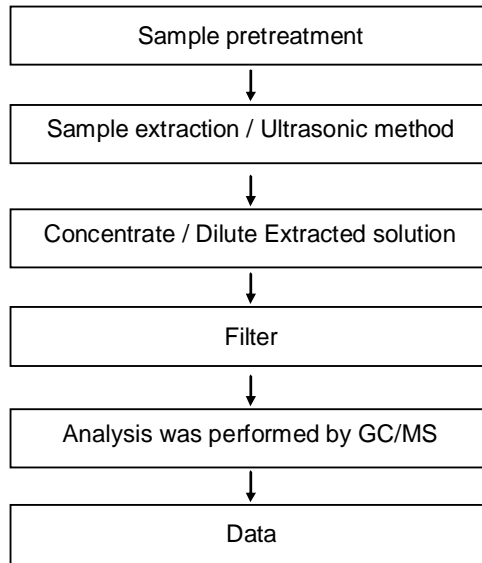
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Ethylene glycol ether analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHLDQ&ROGWLROV R I 6H\YLH SLQVHG RYHLDI DYDIDEG RQ UHTXHWIRUDFFHVVIEGH DWKWS Z Z Z VJV FRP HQ ZHIP V DQG &ROGWLROV DVS [DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIHFWR 7HIP V DQG &ROGWLROV IRU (HQFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DQG &ROGWLROV 7HIP VH ' RFXP HQW DVS ' S\WHQVRO LV GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDVRO DQG IKLVGIEVRO LVVXHV GHVHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP D\RO FROVIDHG KHLRO LHGHFW VKH & RP SDQ\ LV IQGILQV DWVKH VLP H R I LW IQVHUYHQVRO ROQ DOG Z LWLQ VKH QP LW R I FQHQWLV IQVDFVRO U DO\ 7KH & RP SDQ\W VRGH LHVSRQVIEQW LV IR LW & QHQWDOG IKLV GRFXP HQWGRHV QRWH[ROHLDVH SDUWV IR D VLDQVDFVRO IURP H[HFWLVQJ DQVKHWLWJ\K\W DOG REQJEDVROV XQGHUVKH VLDQVDFVRO GRFXP HQW 7KLV GRFXP HQWFDQQRWEH LHSURGXFHG H[FHSWLD IXQ Z WKRXWSURUZ LWVHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXIKR\JHG DQHLVRO IRWHU RU IDQVDFVRO R I VKH FROVHQW RU DSSHLDQFH R I IKLV GRFXP HQWLV XQDZ IXODQG R I HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHV[WHQW R I VKH QZ 8Q@VV RIKHUZ LV VIDIHG VKH LHVXQV KRZ Q D\ IKLV VHWLHSRUWV IHURQO IR VKH VDP SH V VHVHG

Test Report

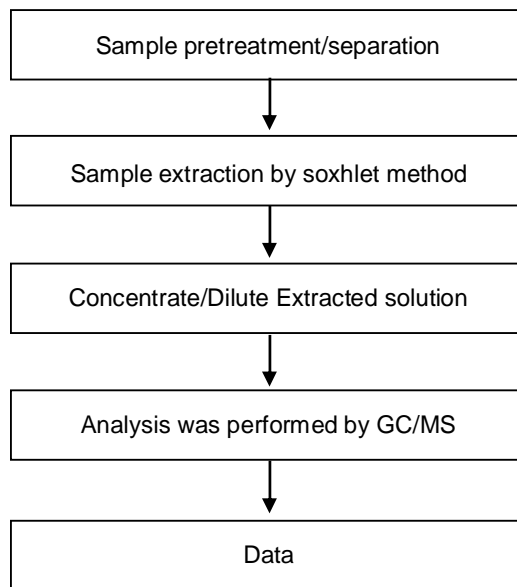
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Analytical flow chart of phthalate content

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHDO&ROGWRQV R I 6H\UHF SUQVHG RYHUHDI DYDQDEH RQ UHTXHWWRUDFFHVVIEGH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV DVS [DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIHFWR 7HIP V DOG &ROGWRQV IRU (HFVURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWRQV 7HIP VH ' RFXP HQW DVS ' S\WHQWRQ LV GLDZ Q IR VKH QP WDWBQ R I QDEIQM IQGHP QULFEDWRQ DOG IKLV/GFVWRQ LVVXHV GHUHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DWBQ FROVDIDHG KKHURQ UHQFW VKH & RP SDQ\W IQGQV DWVKH VLP H R I LW IQWUHQVWRQ ROQ DOG Z LWLQ VKH QP UW R I FQHQWV IQVUQVWRQ U DO\ 7KH &RP SDQ\W VRGH UHVSQRVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQWGRHV QRWH [ROHDIH SDUHWV IR D VUDQDFVWRQ IURP H [HFVLDQJ DQVKHWUJKWV DOG REQJEDWRQV XQGHUVKH VUDQDFVWRQ GRFXP HQW 7KLV GRFXP HQWFDQQRWEH UHSURGXFHG H [FHSWLD IXQ Z WKRXWSURUZ UWHQ DSSURYDOR I VKH &RP SDQ\ \$Q XQDXIKRULJHG DQHLVWRQ IRWHU RU IDQWVWRQ R I VKH FROHQW RU DSSHUHQFH R I IKLV GRFXP HQWLV XQDZ IXQDQ R I HQGHU P D\ EH SURVHFVHG IR VKH IXQVWH [VHQW R I VKH QZ 8Q@VV RIKHUZ W VH VDHG VKH UHVXOW VKRZ Q D IKLV VHWUHSRUWUHQURQV IR VKH VDP SH V VHVHG

Test Report

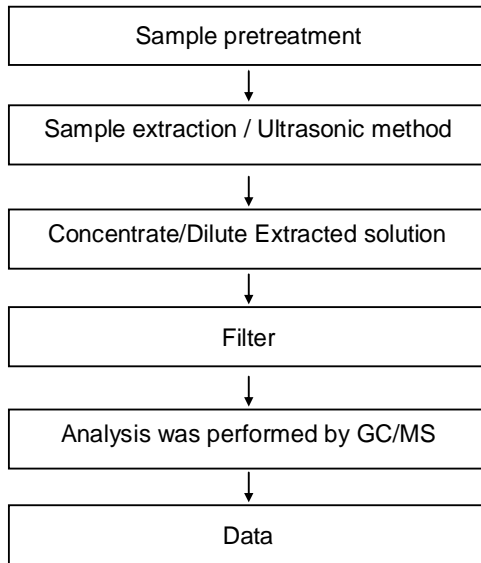
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CE/ 2014/ 72967B*

HBCDD analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWLROV R I 6H\YLH SLQVHG RYHLDH I DYDIDEG RQ UHTXHWIRUDFFHVVIEGH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV DVSI DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR ZHIP V DOG &ROGWLROV IRU (HQFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV ZHIP VH ' RFXP HQW DVSI \$WHQWRO LV GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDWRO DOG IKLV GLEWRO LVVXHV GHIDHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DWRO FROVIDHG KKHRO UHQFW VKH & RP SDQ\ LV IQGIDV DWVKH VLP H R I LW IQWUHQWRO ROQ DOG Z LWID VKH QP UW R I FQHQWLV IQWIDFWRO U DO\ 7KH & RP SDQ\W VRGH LHVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRWH IROHDIH SDUWV IR D VLDQVDFWRO IUP H I HFWLVQJ DQVKHWLWJKWV DOG REQJDFWRO XQGHUVKH VLDQVDFWRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH LHSURGXFHG H I FHSW IQ XQD Z WKRXWSURUZ UWHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXIKRULJHG DOHLDWRO IRWHU RU IDWVDFWRO R I VKH FROHQW RU DSSHDDQFH R I IKLV GRFXP HQWLV XQDZ IXODQG R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQWVWH IWHQW R I VKH QZ 8Q@VV RIKHUZ LVH VIDHG VKH LHVXQV VKRZ Q IQ VKLV IHWLHSRUWUWHURQO IR VKH VDP SOH V IHWVHG

Test Report

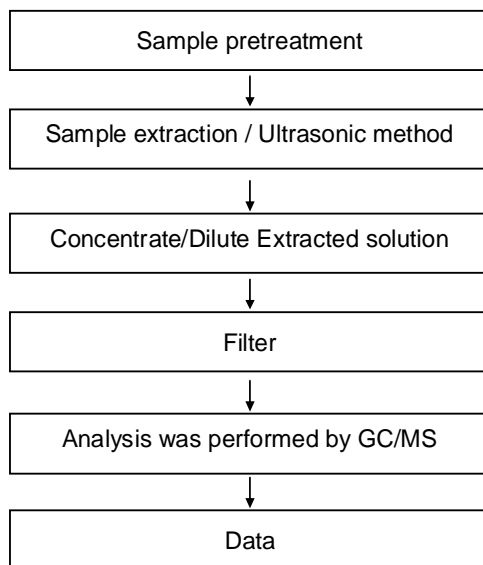
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CE/ 2014/ 72967B*

Dimethyl Fumarate analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWLROV R I 6H\YLH SLUWHG RYHUHDI DYDIDEG RQ UHTXHWIRUDFFHVVIEOH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV DVS [DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HIP V DOG &ROGWLROV IRU (HQFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV 7HIP VH ' RFXP HQW DVS ' \$WHQWRO LV GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDWRO DOG IKLV GLEWRO LVVXHV GHUHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGWLVHG VKDWDIRLP DWRO FROVIDHG KHLRO UHQFW VKH & RP SDQ\ W IQGILQV DWVKH WLP H R I LW IQWUHQWRO ROQ DOG Z LWLQ VKH QP UW R I FQHQWLV IQWUHQWRO U DO\ 7KH & RP SDQ\ W VRQ LHVQRQIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRW H [ROHDIH SDUWV IR D WDOQDFWRO IUP H [HFVLQJ DQVKHWLWJKWV DOG REQDWRQV XQGHUWKH WDOQDFWRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH LHSURGXFHG H [FHSW LQ IXQ Z WKRXW SURZ WWHQ DSSURYDOR I VKH & RP SDQ\ \$Q\ XQDXIKRULJHG DOHLDWRO IRWHLU RU IDWUFDWRO R I VKH FROHQW RU DSSHUHQFH R I IKLV GRFXP HQWLV XQDZ IXODQG R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQWVWH [VHQW R I VKH QZ 8Q@VV RIKHUZ W VH WIDHG VKH LHVXQV VKRZ Q D\ IKLV VHWLHSRUWUHQHQQ IR VKH VDP SH V VHWVHG

Test Report

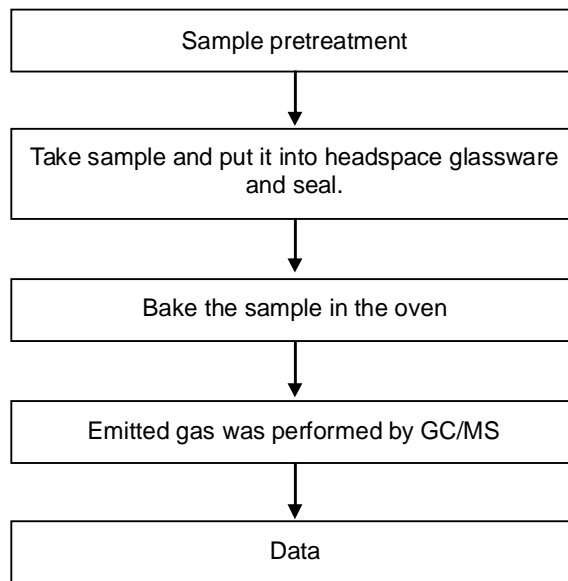
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CE/ 2014/ 72967B*

Analytical flow chart of volatile organic compounds (VOCs)

- Name of the person who made measurement : Chun Wu
- Name of the person in charge of measurement : Shinjyh Chen
【Reference method : US EPA 5021】



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGUWROV R16HLYFH SUQVHG RYHLDHI DYDIDEGH RQ UHTXHWIRUDFFHVVEQH DWKWS ZZZ VJV FRP HQ ZHIP V DQG &ROGUWROV DVSI
DQG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HIP V DQG &ROGUWROV IRU (HQFWURQIE ' RFXP HQW DW KWS ZZZ VJV FRP HQ ZHIP V DQG &ROGUWROV 7HIP VH ' RFXP HQW DVSI \$WHQWRO LV
GLDZ Q IR VKH QP WDWRO R1 QDEIQM IQGHP QULFEDWRO DQG IKLV/GFVRO DVVXHV GHUHQH VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYLHG VKDWLQIRLP DWRO FROVIDHG KHUHQ UHQFW VKH & RP SDQ\ W
IQGLQV DWVKH VLP H R1 LW IQWUHQWRO ROQ DQG Z UKIQ VKH QP UW R1 FQHQWV IQWUHQWRO U DO\ 7KH & RP SDQ\ W VRQ LHVSRQVIEQW LV IR UW & QHQW DQG IKLV GRFXP HQW GRHV QRWH FROHDIH SDUWV
VR D WUQVDFVRO IURP H[HFWLQJ DQVKHWUJKWV DQG REQUEDWROV XQGHUVKH WUQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDOQRWEH LHSURGXFHG H[FHSWQ IXQ Z WKRXW SURUZ UWHQ DSSURYDOR I VKH
& RP SDQ\ \$Q XQDXIKRULJHG DQWUWRO IRWUHQ RU IDWUWEDWRO R1 VKH FROHQW RU DSSHUHQFH R1 IKLV GRFXP HQWLV XQDZ IXQDQ R1 HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHVHQW R1 VKH QZ
8QWV RIKHUZ W VIDIHG VKH LHVXQV VQRZ Q IQ VKLV VHWUHSRUWUHQWRO IR VKH VDP SH V VHWVHG

Test Report

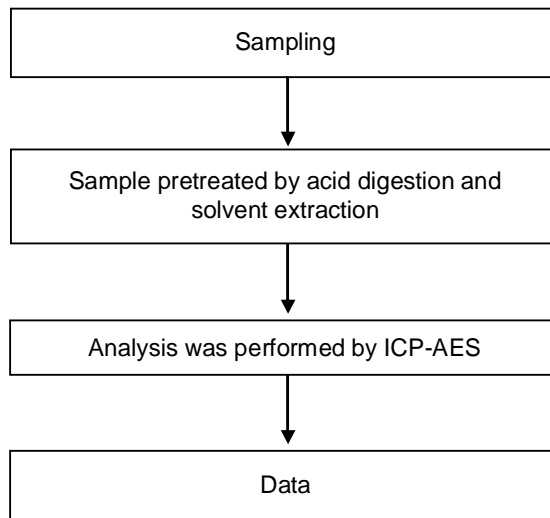
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Analytical flow chart of Cobalt dichloride

- Name of the person who made measurement: Climbgreat Yang
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWLROV R I 6HLYLH SLQVHG RYHLDH I DYDIDEG RQ UHTXHWIRUDFFHVIEGH DWKWS Z Z Z VJV FRP HQ 7HLP V DQG &ROGWLROV DVS I DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HLP V DQG &ROGWLROV IRU (HQFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ 7HLP V DQG &ROGWLROV 7HLP VH ' RFXP HQW DVS I \$WHQVRO LV GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDVRO DQG IKLV GLEVRO LVVXHV GHVHGH VKHLDH \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DWRQ FROVIDHG KHLRO LHGHFW VKH & RP SDQ\ W IQGILQV DWVKH VLP H R I LW IQWUHQVRO ROQ DOG Z LKIQ VKH QP UW R I FQHQWLV IDVUDVRO U DO\ 7KH & RP SDQ\ W VRGH LHVSRQVIEQW LV IR LW & QHQWDOG IKLV GRFXP HQW GRHV QRWH FROHLDH SDUHV IR D VLDQVDFVRO IUP H HFWLVQJ DQVKHWLWJKWV DOG REQJEDVRO XQGHUVKH VLDQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH LHSURGXFHG H FHSWLD IXDZ WKRXW SURUZ UWHQ DSSURYDOR I VKH & RP SDQ\ \$Q\ XQDXIKRULJHG DQHLVRO IRWHU RU IDVUFDVRO R I VKH FROVHQW RU DSSHLDQFH R I IKLV GRFXP HQWLV XQDZ IXODQG R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHV FHWIR I VKH QZ 8Q@VV RIKHUZ W VH VDHG VKH LHVXQV KRZ Q D\ IKLV VHWLHSRUWUHQURQV IR VKH VDP SH V VHVHG

Test Report

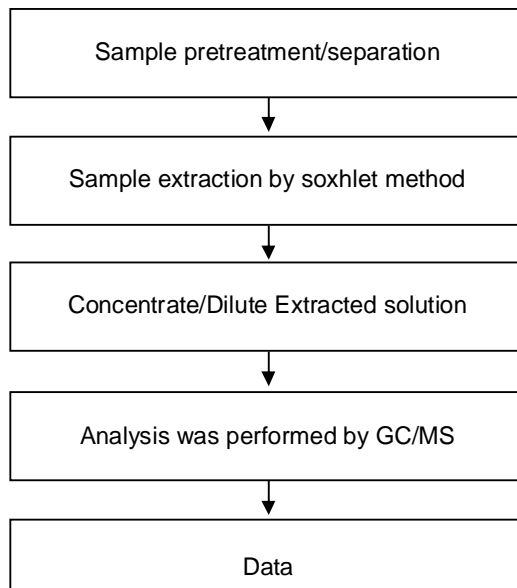
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Benzotriazole analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWLROV R I 6H\YLH SLQVHG RYHLDH I DYDQDEH RQ UHTXHWIRUDFFHVIEQH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV DVS I DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR ZHIP V DOG &ROGWLROV IRU (HQFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV ZHIP VH ' RFXP HQW DVS I \$WHQWLRO LV GLDZ Q IR VKH QP LWVRO R I QDEIQM IQGHP QULFEDNRQ DOG IKLV/GLEWRO LVVXHV GHUHQH VKHUHQ \$Q\ KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DWRQ FROVIDHGH KHUHQ LHGHFW VKH & RP SDQ\ LV IQGILQV DWVKH VLP H R I LW IQWUHQWRO ROQ DOG Z LWLQ VKH QP LW R I FQHQWLV IQDQDFWRO U DO\ 7KH & RP SDQ\W VRGH LHVSRQVIEQW LV IR LW & QHQWDOG IKLV GRFXP HQWGRHV QRWH IROHLDH SDUWV IR D VLDQDFWRO IURP H I HFWLVQJ DQVKHWLWJWKW DOG REQLFEDNRQV XQGHUVKH VLDQDFWRO GRFXP HQW 7KLV GRFXP HQWFDQQRWEH LHSURGXFHG H I FHSWLD IXQ Z WKRXWSDUW LWHQ DSSURYDOR I VKH & RP SDQ\ \$Q\ XQDXIKRULJHG DQHLWRO IRWHU RU IDQWLFEDNRQ R I VKH FROVHQW RU DSSHLDQFH R I IKLV GRFXP HQWLV XQDZ IXQDQ R I HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWH I HQW R I VKH QZ 8Q@VV RIKHUZ LV VIDIHG VKH LHVXOW VKRZ Q Q IKLV VHWLHSRUWUHQURQV IR VKH VDP SH V VHVHG

Test Report

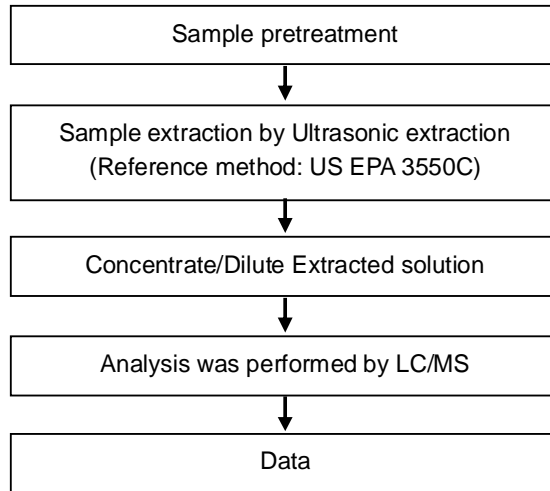
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CE/ 2014/ 72967B*

PFOA/PFOS analytical flow chart of Ultrasonic extraction (LC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHLDQ&ROGWLROV R I 6H\YLH SLQVHG RYHLDH I DYDQDEH RQ UHTXHWIRUDFFHVVIEH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV DVS I DOG IRU HQHFWURQIE IRUP DW GRFXP HQWV VXEIHFWR 7HIP V DOG &ROGWLROV IRU (OHFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV 7HIP VH ' RFXP HQW DVS I \$WHQWLRO LV GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDWR DOG IKLV GLEWRQ LVVXHV GHUHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGWLVHG VKDWDIRLP DWRO FROVDIDHG KKHRO UHQFW VKH & RP SDQ\ W IQGILQV DWVKH VLP H R I LW IQWUHQWRO ROQ DOG Z LWLQ VKH QP UW R I FQHQWLV IQWLVFWRQ U DO\ 7KH & RP SDQ\ W VRGH UHVSROVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRWH FROHDIH SDUHV IR D VLDQVDFWRQ IURP H [HFWLVQJ DQVKHWLWJWKW DOG REQJDFWRQV XQGHUVKH VLDQVDFWRQ GRFXP HQW 7KLV GRFXP HQW FDQQRWEH UHSURGXFHG H [FHSW LQ IXQ Z WKRXW SURUZ UWHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXIKRULJHG DQHLWRQ IRWHU RU IDWLVFWRQ R I VKH FROHDIH RU DSSHDDQFH R I IKLV GRFXP HQWLV XQDZ IXODQG R IHQGHUW P D\ EH SURVHFVXHG IR VKH IXQVWH [VHQW R I VKH QZ 8Q@VV RIKHUZ LVH VIDHG VKH UHVXOW VKRZ Q D\ IKLV VHWUHSRUWUHQURQQ IR VKH VDP SOH V VHVHG

Test Report

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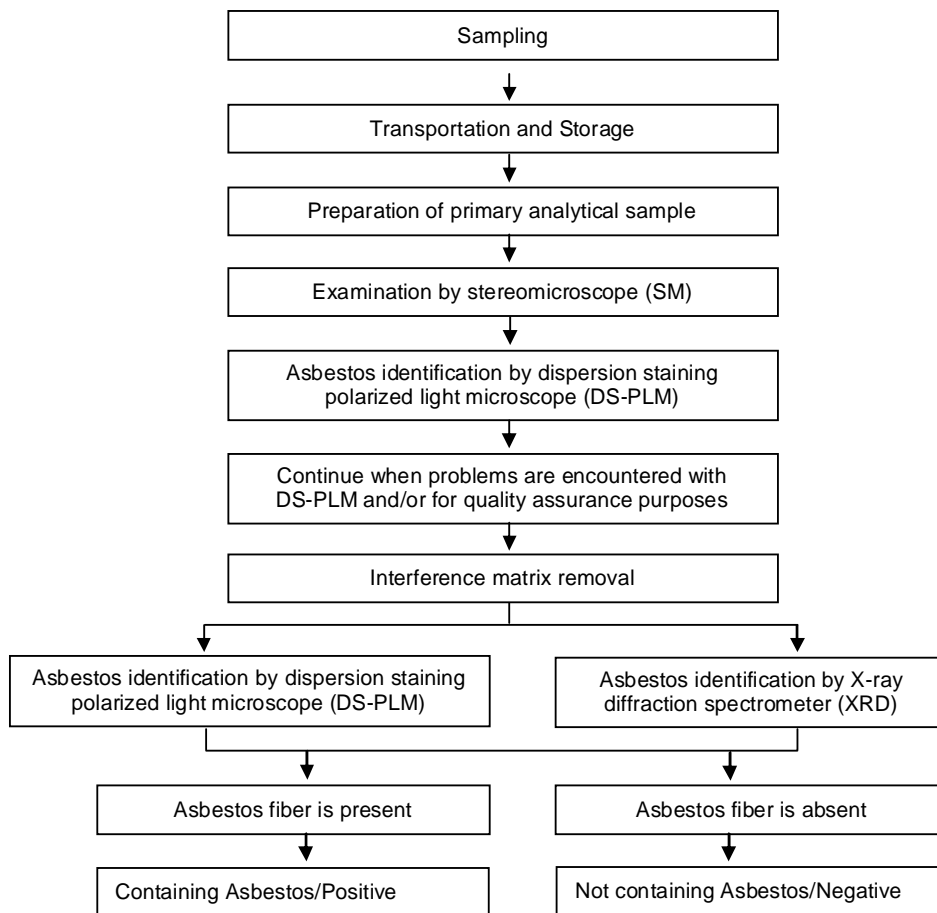
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CE/ 2014/ 72967B*

Analysis flow chart for determination of Asbestos

- Name of the person who made measurement: Victor Kao
- Name of the person in charge of measurement: Wendy Wei

[Reference method: EPA 600/R-93/116]



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHDO&ROGUWROV R16HLYFH SUQVHG RYHLDHI DYDIDEGH RQ UHTXHWIRUDFFHVVEGH DWKWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV DVS I DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIHFWR 7HIP V DOG &ROGUWROV IRU (HFVURQIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ ZHIP V DOG &ROGUWROV 7HIP VH ' RFXP HQW DVS I \$WHQWRO LV GLDZ Q IR VKH QP WDWRO R1 QDEIQM IQGHP QWEDWRO DOG IKLV/GFVRO IVVXHV GHVQHG VKHUHQ \$Q KRGHU R1 IKLV GRFXP HQWLV DGYVHG VKDWDIRLP DWRO FROVIDHG KHUHQ UHQFW VKH & RP SDQ\ W IQGIGLV DWVKH VLP H R1 UW IQVHUHQWRO ROQ DOG Z WKLQ VKH QP UW R1 FQHQWV IQVWVFWRO U DO\ 7KH & RP SDQ\ W VRGH UHVSQVIEQW LV IR UW & QHQW DOG IKLV GRFXP HQW GRHV QRWH [ROHLDH SDUWV IR D WDOQDFVRO IUP H [HFVWQJ DQVKWLVWJKWV DOG REQJWROV XQGHUVKH WDOQDFVRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH UHSRQVHG H [FHSW IQ XQD Z WKRXW SUWZ UWHQ DSSURYDOR I VKH & RP SDQ\ \$Q XQDXIKRLLJHG DQHLWRO IRWHU RU IDQWEDWRO R1 VKH FROVHQW RU DSSHDDQFH R1 IKLV GRFXP HQWLV XQDZ IXDQDG R1 HQGHUW P D\ EH SURVFXVHG IR VKH IXQVWH [VHQW R1 VKH QZ 8Q@VV RIKHUZ WV VIDIHG VKH UHVXQV VKRZ Q IQ VKLV VHWUHSRUWUHQURQV IR VKH VDP SQH V VHVVHG

Test Report

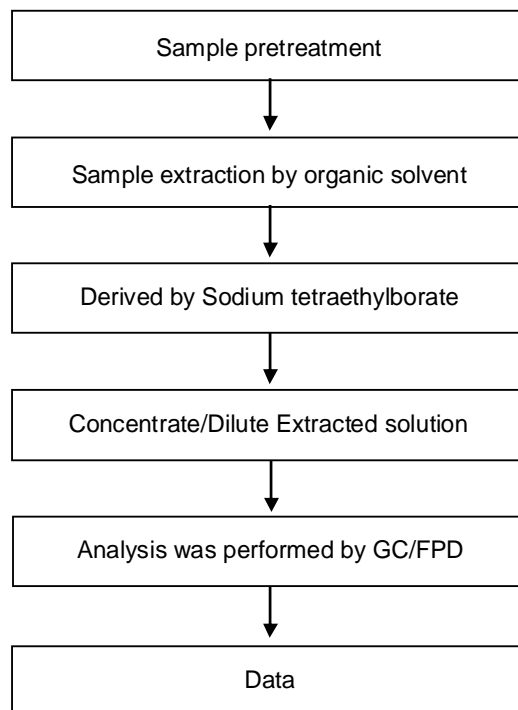
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CE/ 2014/ 72967B*

Analytical flow chart of Organic-Tin content

- Name of the person who made measurement: Roy Lin
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWURQV R I 6H\UHF SUQVHG RYHUHDI DYDQDEH RQ UHTXHWIRUDFFHVIEQH DWKWS Z Z Z VJV FRP HQ 7HIP V DOG &ROGWUROV DVS [DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HIP V DOG &ROGWURQV IRU (HFVURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ 7HIP V DOG &ROGWUROV 7HIP VH ' RFXP HQW DVS [\$WHQVRO LV GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDVRO DOG IKLV/GFVRO IVVXHV GHUHQH VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGWVHG VKDWDIRLP DVRO FROVIDIHG KHUHQ UHQFW VKH & RP SDQ\ W IQGQV D\WKH VLP H R I LW IQWVHQVRO ROQ DOG Z UKIQ VKH QP UW R I FQHQWV IQDQVRO U DO\ 7KH &RP SDQ\W VRQ HVSRQVIEQW LV IR UW & QHQWDOG IKLV GRFXP HQWGRHV QRWH [ROHUVH SDUHV IR D VLDQVDFVRO IURP H [HFVWQJ DQVKHVWUJKV DOG REQJEDVRO XQGHUVKH VLDQVDFVRO GRFXP HQW 7KLV GRFXP HQWFDQQRWEH UHSURGXFHG H [FHSWQ IXQ Z UKRXWSRUZ UWHQ DSSURYDOR I VKH &RP SDQ\ \$Q XQDXIKRUVHG DQHLVRO IRWHU RU IDQVDFVRO R I VKH FROVHQW RU DSSHUHQFH R I IKLV GRFXP HQWLV XQDZ IXQDQ R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQVWH [VHQW R I VKH QZ 8Q@VV RIKHUZ W VDHG VKH UHVXOW VKRZ Q D\ IKLV VHWUHSRUWUHQURQV IR VKH VDP SQH V VHVHG

Test Report

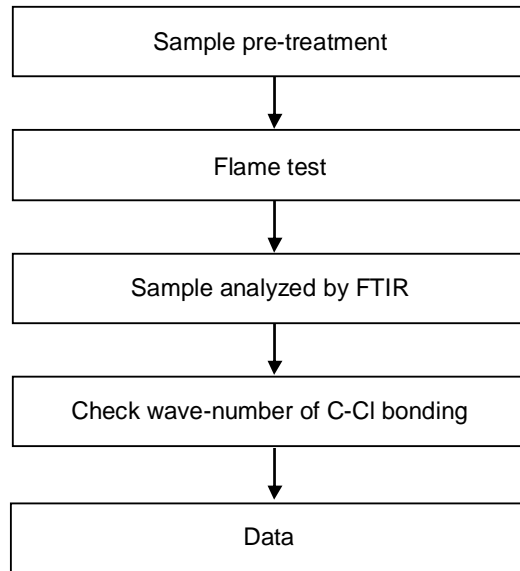
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Analysis flow chart for determination of PVC in material

- Name of the person who made measurement: Roy Lin
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGUWROV R I 6H\U\H SUQVHG RYHUHDI DYDIDEGH RQ UHTXHVWIRUDFFHVVEGH DWKWS Z Z Z VJV FRP HQ ZHIP V DQG &ROGUWROV DVSI
DQG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HIP V DQG &ROGUWROV IRU (HFVURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DQG &ROGUWROV 7HIP VH ' RFXP HQW DVSI \$WHQVRO LV
GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDVRO DQG IKLV/GFVRO DVXHV GHUHQH VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWIDIRLP DVRO FROVIDHG KHLRO UHQFW VKH & RP SDQ\ W
IQGLQV DWVKH VLP H R I LW IQWUHQVRO ROQ DQG Z UKIQ VKH QP UW R I FQHQWV IDQVDFVRO U DO\ 7KH & RP SDQ\ W VRQ LHVSRQVIEQW LV IR UW & QHQW DQG IKLV GRFXP HQW GRHV QRW H FROHUVH SDUWV
VR D VLDQVDFVRO IURP H HFWLVQJ DQVKHWUJKWV DQG REQJDFVRO XQGHUVKH VLDQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH LHSURGXFHG H FHSWQ IXQ Z UKRXWSURUZ UWHQ DSSURYDOR I VKH
& RP SDQ\ \$Q\ XQDXIKRULJHG DQHLVRO IRWHU RU IDQVDFVRO R I VKH FROHQW RU DSSHUHQFH R I IKLV GRFXP HQWLV XQDZ IXQDQ R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHV H QW R I VKH QZ
8Q@VV RIKHUZ W H VDHG VKH LHVXQV VKRZ Q Q\ IKLV VHWLHSRUWUHQHQO IR VKH VDP SQH V VHVHG

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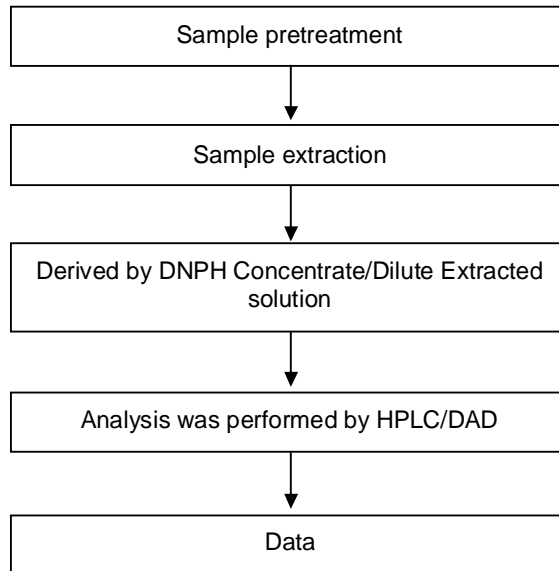
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CE/ 2014/ 72967B*

Formaldehyde analytical flow chart

- Name of the person who made measurement: Yaling Tu
- Name of the person in charge of measurement: Troy Chang

【 Test Method : US EPA 8315A \ ISO 17226-1 】



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWLROV R I 6H\YLH SLQVHG RYHLDH I DYDIDEGH RQ UHTXHWIRUDFFHVVEQH DWKWS . Z Z Z VJV FRP HQ 7HIP V DOG &ROGWLROV DVS I DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HIP V DOG &ROGWLROV IRU (OHFWURQIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ 7HIP V DOG &ROGWLROV 7HIP VH ' RFXP HQW DVS I \$WHQWLRO LV GLDZ Q IR VKH QP WDWBQ R I QDEIQM IQGHP QULFEDWBQ DOG IKLV/GLEWBQ LVVXHV GHIDHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DWBQ FROVIDIDHG KHLHRQ UHQFW VKH & RP SDQ\ W IQGILQV DWVKH VLP H R I LW IQWUHQWBQ ROQ DOG Z LWLQ VKH QP UW R I FQHQWLV IQDVLFWBQ U DO\ 7KH &RP SDQ\ W VRQ LHVSRQVIEQW LV IR LW & QHQW DOG IKLV GRFXP HQW GRHV QRWH IROHDIH SDUWHV IR D WLDQVDFWBQ IURP H I HFWLVQJ DQVKHWLWJWKW DOG REQJDFWBQV XQGHWVKH WLDQVDFWBQ GRFXP HQW 7KLV GRFXP HQW FDQQRWIEH LHSURGXFHG H I FHSW LQ IXQ Z WKRXW SURUZ WWHQ DSSURYDOR I VKH & RP SDQ\ \$Q\ XQDXIKRULJHG DQHLWBQ IRWHU RU IDQWLFEDWBQ R I VKH FROHWQW RU DSSHDDQFH R I IKLV GRFXP HQWLV XQDZ IXQDQG R I HQGHUW P D\ EH SURVHFVHG IR VKH IXQVWHV I HQW R I VKH QZ 8Q@VV RIKHUZ W H VIDIHG VKH LHVXQV VKRZ Q Q\ IKLV VHWLHSRUWUHQURQQ IR VKH VDP SH V VHWVHG

Test Report

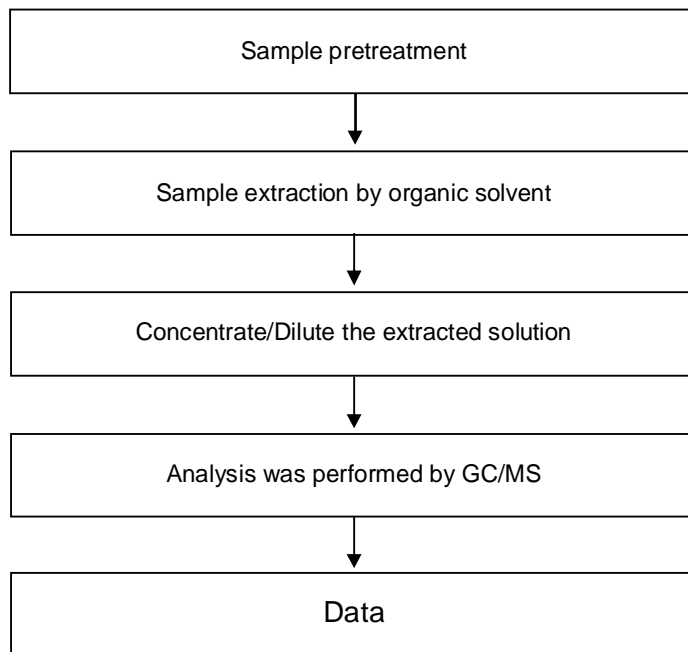
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CE/ 2014/ 72967B*

Chlorinated Paraffins analytical flow chart

- Name of the person who made measurement: Barry Tseng
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWLROV R I 6H\YLH SLQVHG RYHLDH I DYDIDEG RQ UHTXHWIRUDFFHVIEQH DWKWS . Z Z Z VJV FRP HQ 7HLP V DQG &ROGWLROV DVS I
DQG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HLP V DQG &ROGWLROV IRU (HQFWURQIE ' RFXP HQW DW KWS . Z Z Z VJV FRP HQ 7HLP V DQG &ROGWLROV 7HLP VH ' RFXP HQW DVS I \$WHQVRO LV
GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDVRO DQG IKLV GLEVRO LVVXHV GHVHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DVRO FROVIDHG KHLRO LHGHFW VKH & RP SDQ LV
IQGILQV DWVKH VLP H R I LW IQVHUYHQVRO ROQ DQG Z LWKQ VKH QP LW R I FQHQWLV IQVDFVRO U DO\ 7KH & RP SDQ\W VRGH LHVSRQVIEQW LV IR LW & QHQW DQG IKLV GRFXP HQW GRHV QRWH IROHDIH SDUHV
VR D VLDQVDFVRO IURP H I HFWLVQJ DQVKHWLWJKWV DQG REQJEDVROV XQGHUVKH VLDQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH LHSURGXFHG H I FHSWQ IXQ Z WKRXWSURZ UWHQ DSSURYDOR I VKH
& RP SDQ\ \$Q XQDXIKRULJHG DQHLVRO IRWHU RU IDQWVDFVRO R I VKH FROVHQW RU DSSHLDQFH R I IKLV GRFXP HQWLV XQDZ IXODQG R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQVWH IWHQW R I VKH QZ
8Q@VV RIKHUZ LV VIDIHG VKH LHVXQV KRZ Q Q IKLV VHWLHSRUWV IHURQQ IR VKH VDP SH V VHVHG

Test Report

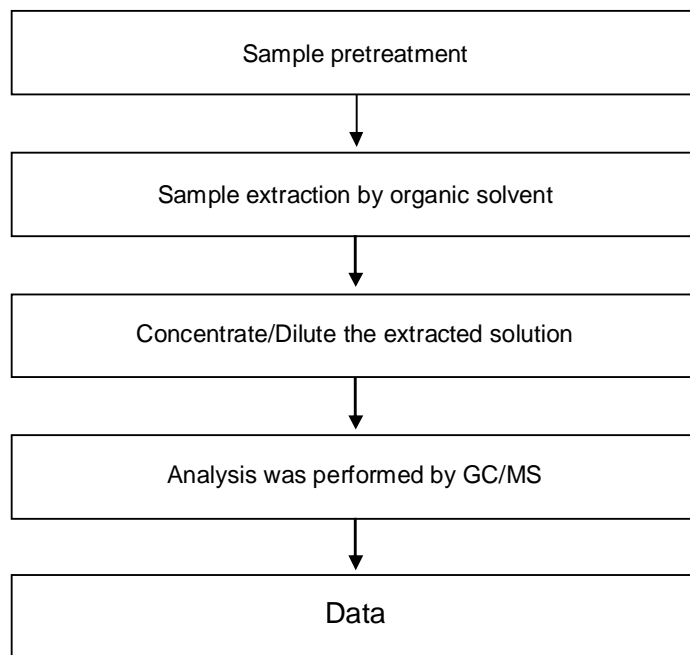
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CE/ 2014/ 72967B*

PCTs analytical flow chart

- Name of the person who made measurement: Barry Tseng
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHDO&ROGWURQV R16HLYFH SUQVHG RYHLDH1 DYDIDEGH RQ UHTXHVWIRUDFFHVVEQH DWKWS Z Z Z VJV FRP HQ 7HLP V DOG &ROGWUROV DVS [DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HLP V DOG &ROGWURQV IRU (HQFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ 7HLP V DOG &ROGWUROV 7HLP VH ' RFXP HQW DVS ' SWHQWRO LV GLDZ Q IR VKH QP WDWRO R1 QDEIQM IQGHP QULFEDWRO DOG IKLV GLEWRO IVVXHV GHUHQH VKHUHQ \$Q\ KRGHU R1 IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DWRO FROVIDHGH KHUHQ UHQFW VKH & RP SDQ\ W IQGILQV DWVKH VLP H R1 LW IQWUHQWRO ROQ DOG Z UKIQ VKH QP UW R1 FQHQWV IQDQDFWRO U DO\ 7KH &RP SDQ\ W VRGH UHVSQRVIEQW LV IR UW & QHQWDOG IKLV GRFXP HQW GRHV QRW H[ROHDIH SDUWV IR D VLDQDFWRO IURP H[HFWLQJ DQVKHWUJKWV DOG REQJEDWROV XQGHUWKH VLDQDFWRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH UHSURGXFHG H[FHSWLO IXQ Z UKRXWSRUZ UWHQ DSSURYDOR1 VKH &RP SDQ\ \$Q\ XQDXIKRULJHG DQHLWRO IRWUHQ RU IDQWLEDWRO R1 VKH FROHQW RU DSSHUHQFH R1 IKLV GRFXP HQWLV XQDZ IXQDQG R1HQGHUW P D\ EH SURVHFVHG IR VKH IXQWVWH[HWQW R1 VKH QZ 8Q@VV RIKHUZ W H VIDIHG VKH UHVXOW VKRZ Q IQ IKLV VHWUHSRUWUHQURQQ IR VKH VDP SH V VHVHGH

Test Report

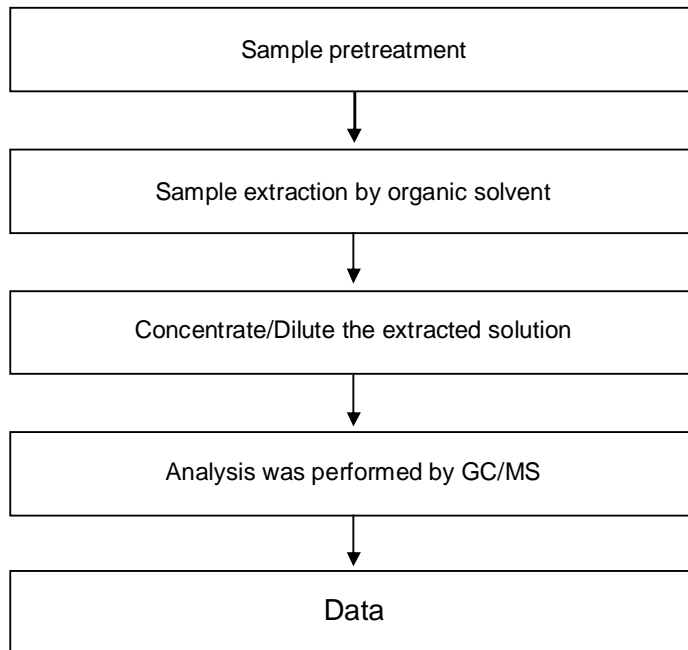
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CE/ 2014/ 72967B*

PCNs analytical flow chart

- Name of the person who made measurement: Barry Tseng
- Name of the person in charge of measurement: Troy Chang



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DQG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HLP V DQG &ROGWLROV IRU (HFVURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ 7HLP V DQG &ROGWLROV 7HLP VH ' RFXP HQW DVS I \$WHQVRO LV
GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDVRO DQG IKLV GLEFVRO LVVXHV GHVHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DVRO FROVDIDHG KHUHQ UHQFW VKH & RP SDQ\ W
IQGILV DWVKH VLP H R I LW IQVHUYHQVRO ROQ DQG Z LWLQ VKH QP UW R I FQHQVW IQVDFVRO U DO\ 7KH & RP SDQ\ W VRGH UHVSQRVIEQW LV IR UW & QHQW DQG IKLV GRFXP HQW GRHV QRWH IROHDIH SDUHV
VR D VUDQVDFVRO IURP H I HFWLQJ DQVKHWLWJWKV DQG REQJEDVROV XQGHUVKH VUDQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH UHURGXFHG H I FHSW IQ IXQ Z WKRXW SURUZ UWHQ DSSURYDOR I VKH
& RP SDQ\ \$Q XQDXIKRULJHG DQHLVRO IRWHU RU IDQVLEDVRO R I VKH FROVHQW RU DSSHDDQFH R I IKLV GRFXP HQWLV XQDZ IXQDQ R IHQGHUW P D\ EH SURVHFVXVHG IR VKH IXQVWH I HQW R I VKH QZ
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Test Report

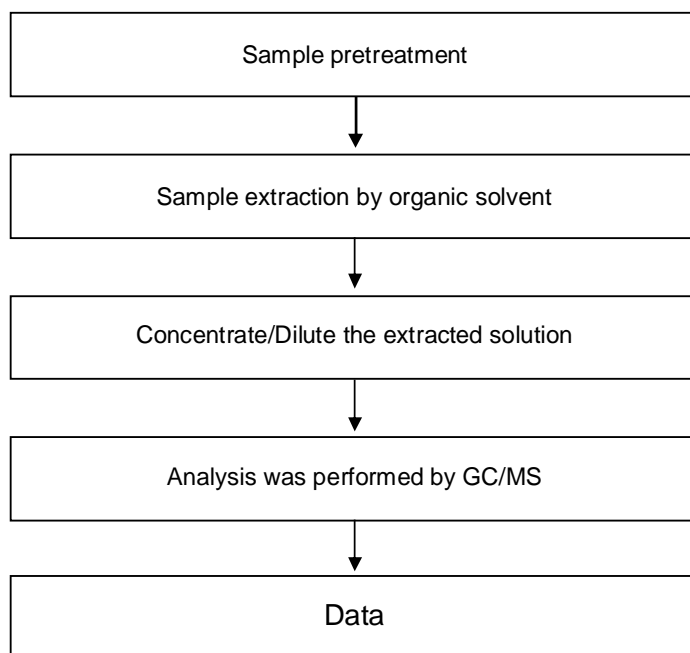
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PCBs analytical flow chart

- Name of the person who made measurement: Barry Tseng
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWLROV R I 6H\YLH SLQVHG RYHLDH I DYDQDEH RQ UHTXHWIRUDFFHVVEQH DWKWS Z Z Z VJV FRP HQ 7HLP V DQG &ROGWLROV DVS I
DQG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HLP V DQG &ROGWLROV IRU (HFVURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ 7HLP V DQG &ROGWLROV 7HLP VH ' RFXP HQW DVS I \$WHQVRO LV
GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDVRO DQG IKLV GLEFVRO LVVXHV GHVHG VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DVRO FROVIDHG KHLRO LHGHFW VKH & RP SDQ\ W
IQGLQV DWVKH VLP H R I LW IQVHUYHQVRO ROQ DQG Z LWKQ VKH QP UW R I FQHQWLV IQVDFVRO U DO\ 7KH & RP SDQ\ W VRGH HVSRQVIEQW LV IR UW & QHQW DQG IKLV GRFXP HQW GRHV QRWH FROHDIH SDUHV
VR D VUDQVDFVRO IUP H HFVLDQ DQVKHWLWJKV DQG REQJEDVRO XQGHUVKH VUDQVDFVRO GRFXP HQW 7KLV GRFXP HQW FDQQRWEH LHSURGXFHG H FHSW IQ IXQ Z WKRXWSURZ UWHQ DSSURYDOR I VKH
& RP SDQ\ \$Q XQDXIKRULJHG DQHLVRO IRWHU RU IDQVLEFVRO R I VKH FROVHQW RU DSHDQFH R I IKLV GRFXP HQWLV XQDZ IXQDQ R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQVWH FVHQW R I VKH QZ
8Q@VV RIKHUZ LV VIDIHG VKH LHVXOW VKRZ Q IQ VKLV VHWLHSRUWV IHURQQ IR VKH VDP SH V HVVHG

Test Report

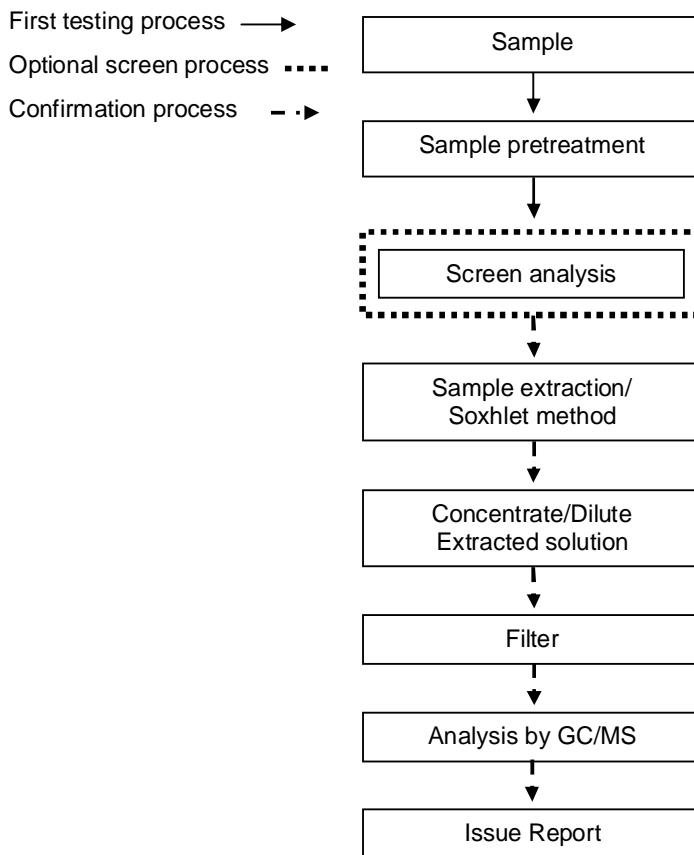
No. : CE/2014/72967B Date : 2014/08/04 Page : 47 of 48

SECOS CORPORATION
8F, NO. 33, LANE 155, SEC. 3, BEI-SHEN RD., SHEN KENG DIST., NEW TAIPEI CITY, TAIWAN

CE/ 2014/ 72967B*

PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIHFWR UW * HOHDO&ROGWRQV R I 6HLYLH SLQVHG RYHLDI DYDQDEH RQ UHTXHWWRUDFFHVVIEH DWKWS Z Z Z VJV FRP HQ 7HIP V DOG &ROGWRQV DVS [DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIHFWR 7HIP V DOG &ROGWRQV IRU (HFWRQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ 7HIP V DOG &ROGWRQV 7HIP VH ' RFXP HQW DVS [\$WHQWRQ LV GLDZ Q IR VKH QP WDWBQ R I QDEIQM IQGHP QULFEDWRQ DOG IKLV GLEWRQ LVVXHV GHIDHG VKHUHO \$Q KRGHU R I IKLV GRFXP HQWLV DGWVHG VKDWDIRLP DWBQ FRQVWDIDHG KHUHQ LHGHFW VKH & RP SDQ\ W IQGIDV DWVKH VLP H R I LW IQWVHQWRQ ROQ DOG Z LWLQ VKH QP LW R I FQHQWV IQWVFKWRQ U DO\ 7KH & RP SDQ\ W VRGH LHVSRQVIEQW LV IR LW & QHQWDOG IKLV GRFXP HQWGRHV QRWH [ROHLDVH SDUWV IR D WLDQVDFWRQ IURP H [HFVWQJ DQVKHWLWJKWV DOG REQJEDWRQV XQGHUVKH WLDQVDFWRQ GRFXP HQW 7KLV GRFXP HQWFDQQRWEH LHSURGXFHG H [FHSWQ IXQ Z WKRXW SURZ WWHQ DSSURYDOR I VKH & RP SDQ\ \$Q\ XQDXIKRULJHG DQHLWRQ IRWHU RU IDQWLFEDWRQ R I VKH FRQVHQW RU DSSHLDQFH R I IKLV GRFXP HQWLV XQDZ IXODQG R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQVWH [VHQW R I VKH QZ 8Q@VV RIKHUZ WV WIDVHG VKH LHVXQV KRZ Q Q\ IKLV VHWLHSRUWV HURQO IR VKH VDP SH V VHVVHG

Test Report

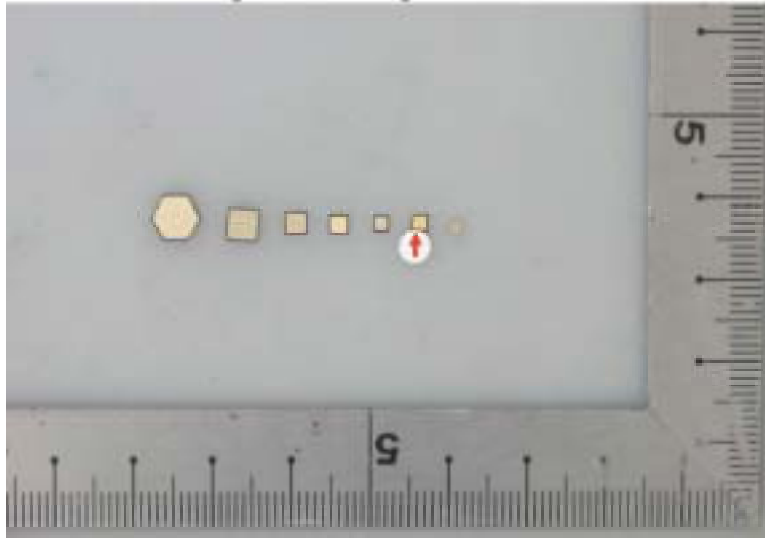
No. : CE/2014/72967B Date : 2014/08/04 Page : 48 of 48

SECOS CORPORATION
8F, NO. 33, LANE 155, SEC. 3, BEI-SHEN RD., SHEN KENG DIST., NEW TAIPEI CITY, TAIWAN

CE/ 2014/ 72967B*

* The tested sample / part is marked by an arrow if it's shown on the photo. *

CE/2014/72967



** End of Report **

7KLV GRFXP HQWLV LWXHG E\ VKH & RP SDQ\ VXEIMFWIR UW * HOHLDQ&ROGWLROV R I 6HLYLH SUQVHG RYHLDHDI DYDIDEGH RQ UHTXHWIRUDFFHVIEGH DWKWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV DVS [DOG IRU HQFWURQIE IRUP DW GRFXP HQWV VXEIMFWIR 7HIP V DOG &ROGWLROV IRU (HQFWURQIE ' RFXP HQW DW KWS Z Z Z VJV FRP HQ ZHIP V DOG &ROGWLROV 7HIP VH ' RFXP HQW DVS ' S'WHQVRO LV GLDZ Q IR VKH QP WDWRO R I QDEIQM IQGHP QULFEDVRO DOG IKLV/GFVRO DVXHV GHUHQH VKHUHQ \$Q KRGHU R I IKLV GRFXP HQWLV DGYLHG VKDWDIRLP DVIRO FROVIDHGH KHUHQ LHGHFW VKH & RP SDQ\ LV IQGILQV DWVKH VLP H R I LW IQWUHQVRO ROQ DOG Z UKIQ VKH QP UW R I FQHQWLV IQDQVRO U DO\ 7KH & RP SDQ\W VRGH LHVSRQVIEQW LV IR LW & QHQWDOG IKLV GRFXP HQWGRHV QRWH [ROHLDVH SDUWLV IR D VLDQVDFVRO IURP H [HFVLDQ DQVKHWLWJKWV DOG REQJDFVRO XQGHUVKH VLDQVDFVRO GRFXP HQW 7KLV GRFXP HQWFDQQRWEH LHSURGXFHG H [FHSWLD IXQ Z UKRXWSLWZ UWHQ DSSURYDOR I VKH & RP SDQ\ \$Q\ XQDXIKRULJHG DQHLVRO IRWHU RU IDQWVDFVRO R I VKH FROVHQW RU DSSHLDQFH R I IKLV GRFXP HQWLV XQDZ IXODQG R IHQGHUW P D\ EH SURVHFVHG IR VKH IXQVWH [VHQW R I VKH QZ 8Q@VV RIKHUZ LVH VIDHG VKH LHVXQV VKRZ Q D\ IKLV VHWLHSRUWUHQURQV IR VKH VDP S@ V VHVHG

Test Report

No. : CE/2013/A0292 Date : 2013/10/09 Page : 1 of 11

EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

CE/2013/A0292

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

Sample Submitted By : EXCEL CELL ELECTRONIC CO., LTD.
Sample Description : C19210 COPPER
Sample Receiving Date : 2013/10/02
Testing Period : 2013/10/02 TO 2013/10/09

Test Result(s) : Please refer to next page(s).

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Test Report

No. : CE/2013/A0292 Date : 2013/10/09 Page : 2 of 11

EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

CE/2013/A0292

Test Result(s)

PART NAME No.1 : COPPER COLORED METAL

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	**	With reference to IEC 62321: 2008 and performed by Boiling water extraction Method.#	#	Negative
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α -HBCDD, β -HBCDD, γ -HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	mg/kg	With reference to IEC 62321: 2008 method. Analysis was performed by GC/MS.	5	n.d.
BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.
PFOA (CAS No.: 335-67-1)	mg/kg	With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.

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Test Report

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EXCEL CELL ELECTRONIC CO., LTD.

CE/2013/A0292

NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

Test Item(s)	Unit	Method	MDL	Result
				No.1
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl			5	n.d.
Sum of PBDEs			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether	5	n.d.		
Decabromodiphenyl ether	5	n.d.		
Halogen	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.		
Halogen-Fluorine (F) (CAS No.: 14762-94-8)			50	n.d.
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)			50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)			50	n.d.
Halogen-Iodine (I) (CAS No.: 14362-44-8)	50	n.d.		

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Test Report

No. : CE/2013/A0292 Date : 2013/10/09 Page : 4 of 11

EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

CE/2013/A0292

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated
5. ** = Qualitative analysis (No Unit)
6. # = a. Positive means the presence of CrVI on the tested areas
b. Negative means the absence of CrVI on the tested areas
The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² tested areas.

PFOS Reference Information : POPs - (EU) 757/2010

Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above 1µg/m².

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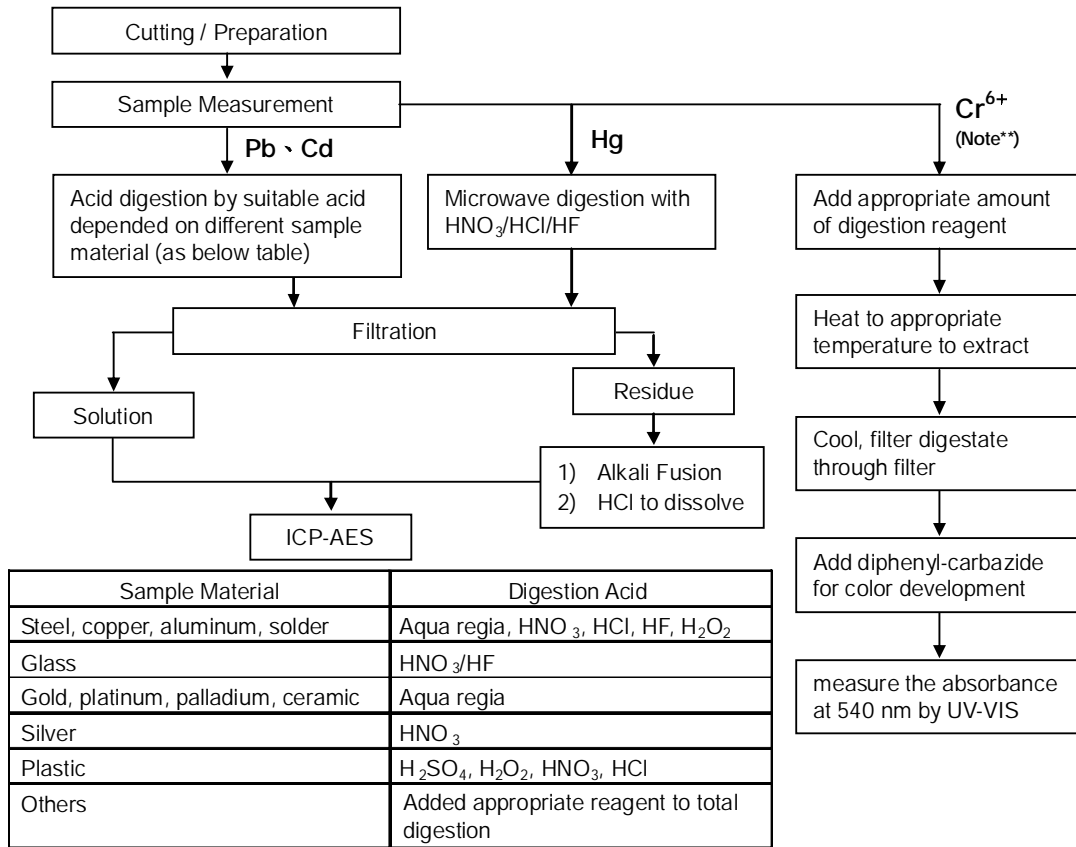
Test Report

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EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

CE/2013/A0292

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95 °C.
(2) For metallic material, add pure water and heat to boiling .

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Test Report

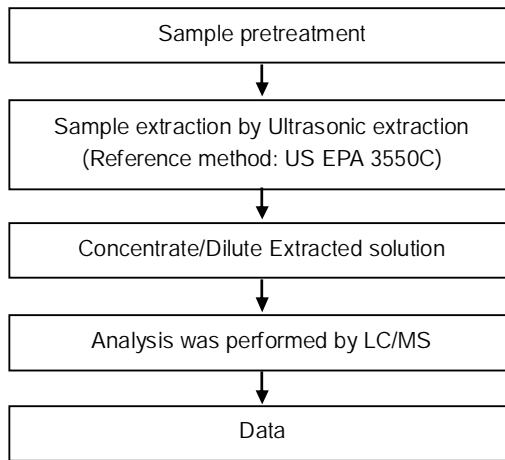
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EXCEL CELL ELECTRONIC CO., LTD.
 NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

CE/2013/A0292

PFOA/PFOS analytical flow chart of Ultrasonic extraction (LC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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Test Report

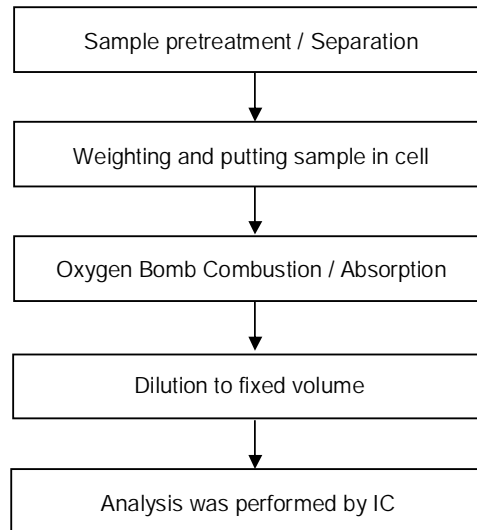
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EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

CE/2013/A0292

Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang



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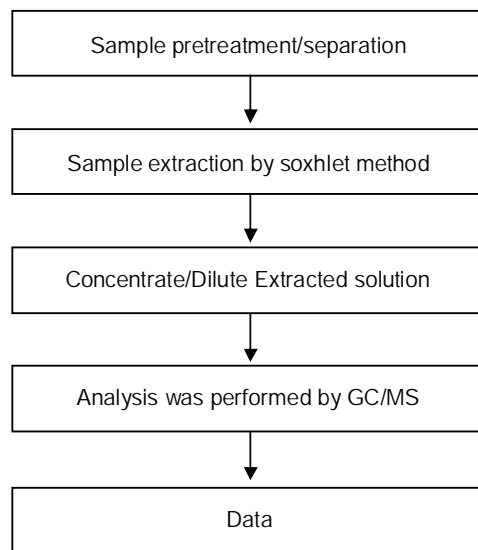
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EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

CE/2013/A0292

Analytical flow chart of phthalate content

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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Test Report

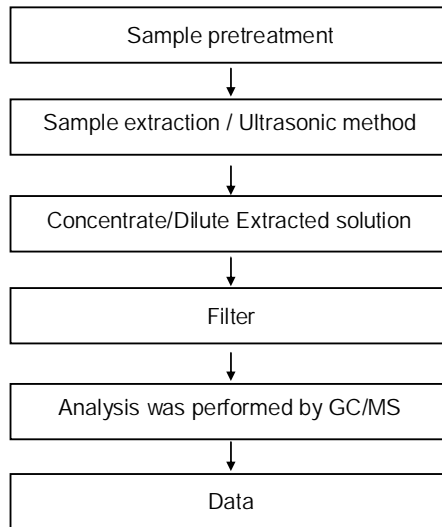
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EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

CE/2013/A0292

HBCDD analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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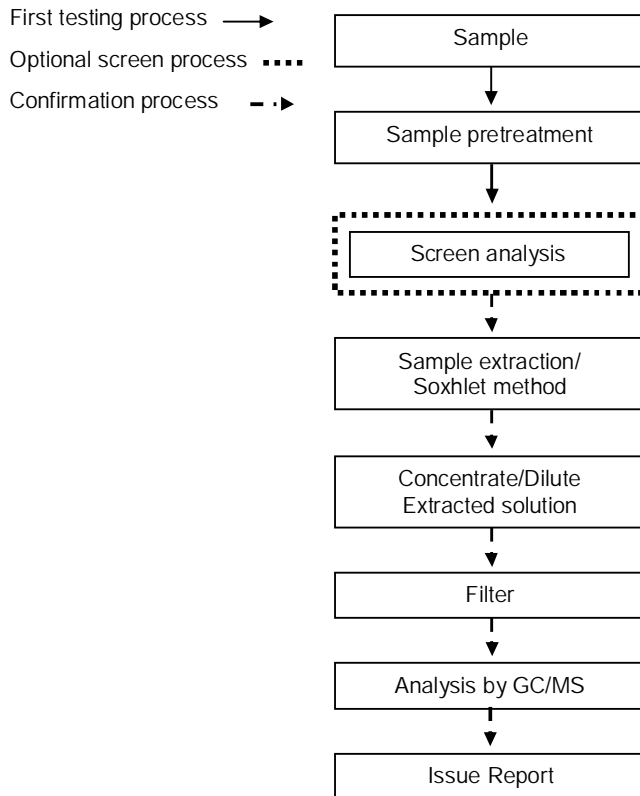
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EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

CE/2013/A0292

PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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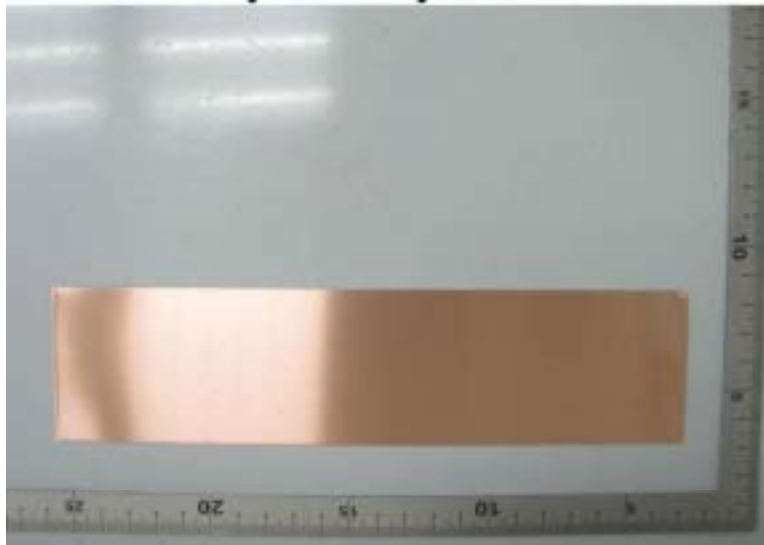
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EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

CE/2013/A0292

* The tested sample / part is marked by an arrow if it's shown on the photo. *

CE/2013/A0292



** End of Report **

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Test Report

No. SHAEC1415422801

Date: 19 Aug 2014

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CHANG CHUN PLASTICS CO.,LTD 、 CHANG CHUN SB(CHANG SHU)CO.,LTD
NO.8, CHUNG HWA ROAD,HSINCHU INDUSTRIAL DISTRICT,TAIWAN 、 CHANGCHUN RD.,RIVERSIDE
INDUSTRIAL PARK,CHANGSHU ECONOMIC DEVELOPMENT ZONE,JIANGSU,CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : Epoxy Molding Compound for semiconductor

SGS Job No. : SP14-024267 - SUZ
Model No. : EME-1200
Client Ref. Information : EME-1100、 EME-2100、 EME-2500、 EME-5000N、 EME-5000VR、 EME-5051 S、 EME-5500F、 EME-5500FL、 EME-5500FR、 EME-5961、 EME-220L、 EC-1 1、 EC-12、 ER100、 ER200、 EME-2050、 EME-1250
Date of Sample Received : 12 Aug 2014
Testing Period : 12 Aug 2014 - 18 Aug 2014
Test Requested : Selected test(s) as requested by client.
Test Method : Please refer to next page(s).
Test Results : Please refer to next page(s).
Conclusion : Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.
When tested as specified, Dimethyl fumarate(DMF) content of the submitted sample comply with Commission Regulation (EU) No 412/2012 and Entry 61 of Annex XVII of REACH Regulation (EC) No 1907/2006

Signed for and on behalf of
SGS-CSTC Ltd.

Marry Ma
Approved Signatory



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA14-154228.001	Black powder

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

RoHS Directive 2011/65/EU

- Test Method :
- (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
 - (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
 - (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
 - (4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
 - (5) With reference to IEC 62321:2008, determination of PBBs and PBDEs by GC-MS.

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	2	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND



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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND

Notes :

(1) The maximum permissible limit is quoted from the directive 2011/65/EU, Annex II

Halogen

Test Method : With reference to EN 14582: 2007, analysis was performed by Ion Chromatograph (IC).

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Fluorine (F)	mg/kg	50	ND
Chlorine (Cl)	mg/kg	50	140
Bromine (Br)	mg/kg	50	10058
Iodine (I)	mg/kg	50	ND

Element(s)

Test Method : With reference to US EPA Method 3052:1996, analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Nickel (Ni)	mg/kg	5	ND
Antimony (Sb)	mg/kg	10	7013
Phosphorus (P)	mg/kg	20	ND

Polychlorinated Naphthalenes (PCNs)

Test Method : With reference to US EPA 8081B: 2007, analysis was performed by GC-MS



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<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
2-Chlorinated Naphthalene	mg/kg	5	ND
1,4-Dichlorinated Naphthalene	mg/kg	5	ND
1,5-Dichlorinated Naphthalene	mg/kg	5	ND
1,2-Dichlorinated Naphthalene	mg/kg	5	ND
1,8-Dichlorinated Naphthalene	mg/kg	5	ND
1,2,3-Trichlorinated Naphthalene	mg/kg	5	ND
1,2,3,4-Tetrachlorinated Naphthalene	mg/kg	5	ND
1,2,3,4,6-Pentachlorinated Naphthalene	mg/kg	5	ND
Octa-chlorinated Naphthalene	mg/kg	5	ND
1-Chlorinated Naphthalene	mg/kg	5	ND

Phthalates

Test Method : With reference to EN 14372:2004, analysis was performed by GC-MS

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Dibutyl Phthalate (DBP)	84-74-2	%	0.003	ND
Benzylbutyl Phthalate (BBP)	85-68-7	%	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	%	0.003	ND
Diisononyl Phthalate (DINP)	28553-12-0 /68515-48-0	%	0.01	ND
Di-n-octyl Phthalate (DNOP)	117-84-0	%	0.003	ND
Diisodecyl Phthalate (DIDP)	26761-40-0 /68515-49-1	%	0.01	ND
Dimethyl Phthalate (DMP)	131-11-3	%	0.003	ND
Diethyl Phthalate (DEP)	84-66-2	%	0.003	ND
Diisobutyl Phthalate (DIBP)	84-69-5	%	0.003	ND
Di-n-pentyl Phthalates (DnPP)	131-18-0	%	0.003	ND
Dicyclohexyl Phthalate (DCHP)	84-61-7	%	0.003	ND
Diphenyl Phthalate (DPhP)	84-62-8	%	0.003	ND



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<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Dibenzyl Phthalate (DBzP)	523-31-9	%	0.003	ND
Diisooctyl Phthalate (DiOP)	27554-26-3	%	0.01	ND
Dipropyl Phthalate (DPrP)	131-16-8	%	0.003	ND
Dinonyl Phthalate (DNP)	84-76-4	%	0.003	ND
Di-n-hexyl Phthalate (DnHP)	84-75-3	%	0.003	ND

Notes :

(1) DBP, BBP, DEHP Reference information: Entry 51 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC):

- i) Shall not be used as substances or in mixtures, in concentrations greater than 0.1 % by weight of the plasticised material, in toys and childcare articles.
- ii) Toys and childcare articles containing these phthalates in a concentration greater than 0.1 % by weight of the plasticised material shall not be placed on the market.

Please refer to Regulation (EC) No 552/2009 to get more detail information

DINP, DNOP, DIDP Reference information: Entry 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC).

- i) Shall not be used as substances or in mixtures, in concentrations greater than 0.1 % by weight of the plasticised material, in toys and childcare articles which can be placed in the mouth by children.
- ii) Such toys and childcare articles containing these phthalates in a concentration greater than 0.1 % by weight of the plasticised material shall not be placed on the market.

Please refer to Regulation (EC) No 552/2009 to get more detail information

Short Chained Chlorinated Paraffin (SCCP) and Medium Chained Chlorinated Paraffin (MCCP)

Test Method : With reference to US EPA 3550C: 2007, analysis was performed by GC-ECD / GC-NCI-MS.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Short Chained Chlorinated Paraffin (SCCP) (C10-C13)	mg/kg	50	ND
Medium Chained Chlorinated Paraffin (MCCP) (C14-C17)	mg/kg	50	ND

Tris(2,3-dibromopropyl) phosphate(TDBPP/TRIS) and Bis (2,3-dibromopropyl) phosphate



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Test Method : In-house method (SHTC-CHEM-SOP-102-T), analysis was performed by LC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Bis (2,3-dibromopropyl) phosphate	5412-25-9	mg/kg	5	ND
Tris(2,3-dibromopropyl) phosphate(TDBPP/TRIS)	126-72-7	mg/kg	5	ND

Hexabromocyclododecane (HBCDD)

Test Method : Determination of HBCDD by GC-MS based on IEC 62321:2008.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

Notes :

- (1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC: Hexabromocyclododecane (HBCDD) is considered as a priority for risk evaluation and substance restriction.

Tetrabromobisphenol A (TBBP-A)

Test Method : With reference to IEC 62321:2008, analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Tetrabromobisphenol A (TBBP-A)	mg/kg	10	ND

Commission Regulation (EU) No 412/2012 and Entry 61 of Annex XVII of REACH Regulation (EC) No 1907/2006 - Dimethyl fumarate(DMF)

Test Method : Solvent extraction, analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Dimethyl fumarate(DMF)	0.1	mg/kg	0.1	ND

Polychlorinated Terphenyls (PCTs)

Test Method : With reference to US EPA 8082A: 2007, analysis was performed by GC-MS



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<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Aroclor 5432	mg/kg	5	ND
Aroclor 5442	mg/kg	5	ND

Notes :

- (1) PCTs Reference Information: Entry 1 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 89/677/EC) Shall not be placed on the market, or used:
 - as substances,
 - In mixtures, including waste oils, or in equipment, in concentrations greater than 50 mg/kg (0,005 % by weight).
- Please refer to Regulation (EC) No 552/2009 to get more detail information

PFOS (Perfluorooctane Sulfonates) and PFOA (Perfluorooctanoic Acid)

Test Method : With reference to US EPA 3550C: 2007, analysis was performed by HPLC-MS.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Perfluorooctane Sulfonates (PFOS) and related Acid,Metal Salt and Amide	1000	mg/kg	10	ND
Perfluorooctanoic Acid (PFOA)	-	mg/kg	10	ND

Notes :

Max. limit specified by commission regulation (EU) No. 757/2010 amending regulation (EC) No 850/2004.

Polychlorinated Biphenyls (PCBs)

Test Method : With reference to US EPA 8082A: 2007, analysis was performed by GC-MS

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
2,4,4'-Trichlorobiphenyl (PCB 28)	7012-37-5	mg/kg	0.5	ND
2,2',5,5'-Tetrachloro-biphenyl (PCB 52)	35693-99-3	mg/kg	0.5	ND
2,2',4,5,5'-Pentachloro-biphenyl (PCB 101)	37680-73-2	mg/kg	0.5	ND
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	31508-00-6	mg/kg	0.5	ND
2,2',3,4,4',5'-Hexachloro-biphenyl (PCB 138)	35065-28-2	mg/kg	0.5	ND



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<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
2,2',4,4',5,5'-Hexachloro-biphenyl (PCB 153)	35065-27-1	mg/kg	0.5	ND
2,2',3,4,4',5,5'-Heptachlorobiphenyl (PCB 180)	35065-29-3	mg/kg	0.5	ND



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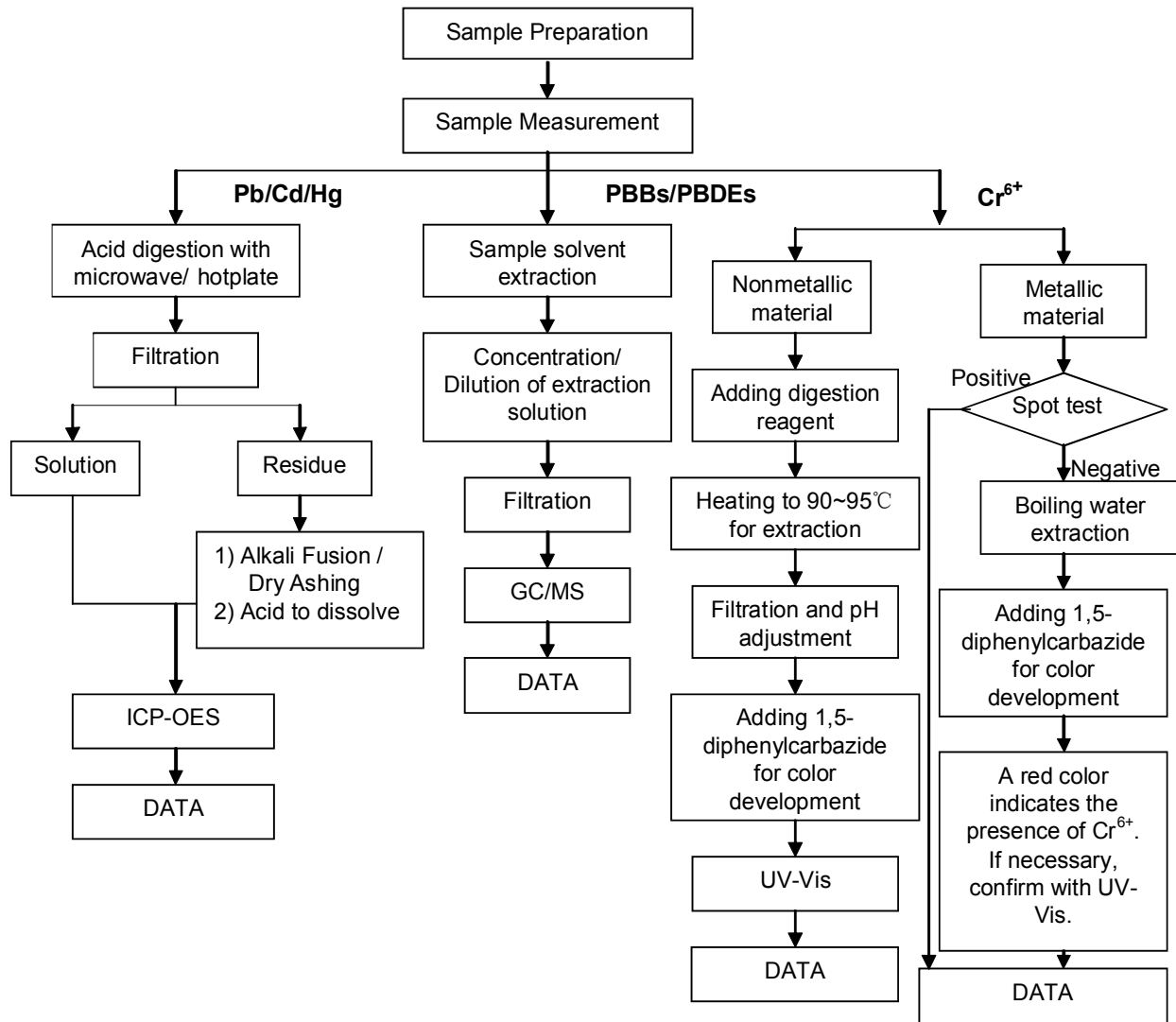
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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Jan Shi/Star Wang/Stone Chen/Gary Xu
- 2) Name of the person in charge of testing: Jeff Zhang/ Jessy Huang
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded)



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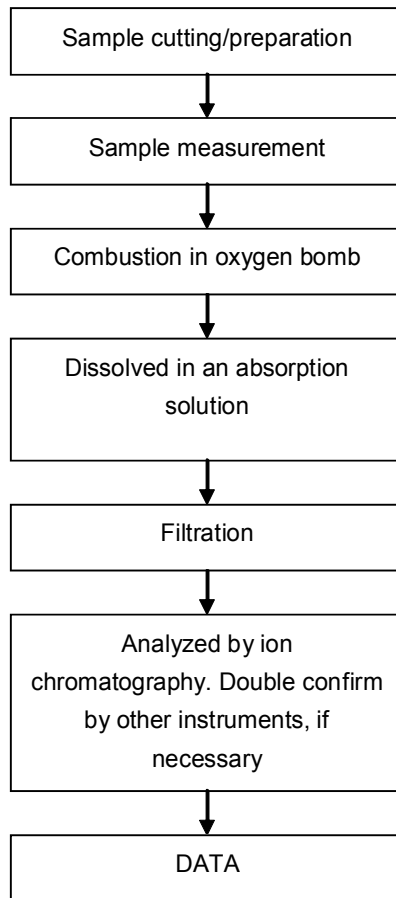
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Halogen Testing (oxygen bomb) Flow Chart

- 1) Name of the person who made testing: Sisily Yin
- 2) Name of the person in charge of testing: Linda Li



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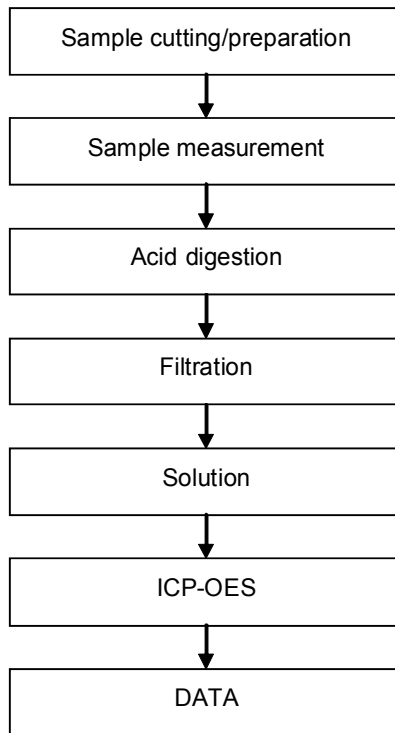
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Elements Testing Flow Chart

- 1) Name of the person who made testing: Star Wang/ Jan Shi
- 2) Name of the person in charge of testing: Jeff Zhang



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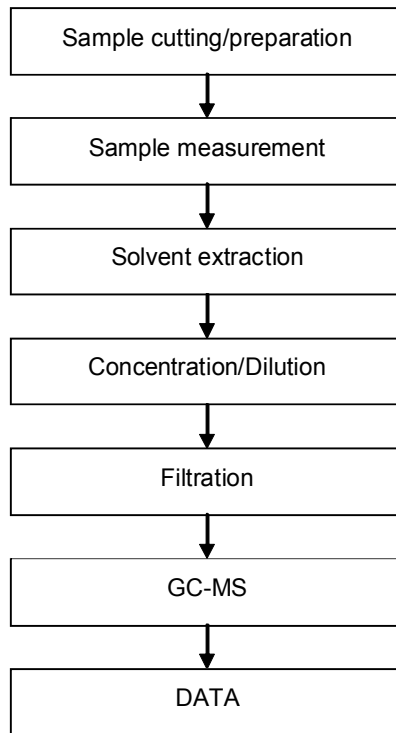
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PCB/ PCT/ PCN Testing Flow Chart

- 1) Name of the person who made testing: Brin Feng
- 2) Name of the person in charge of testing: Zirco Yu



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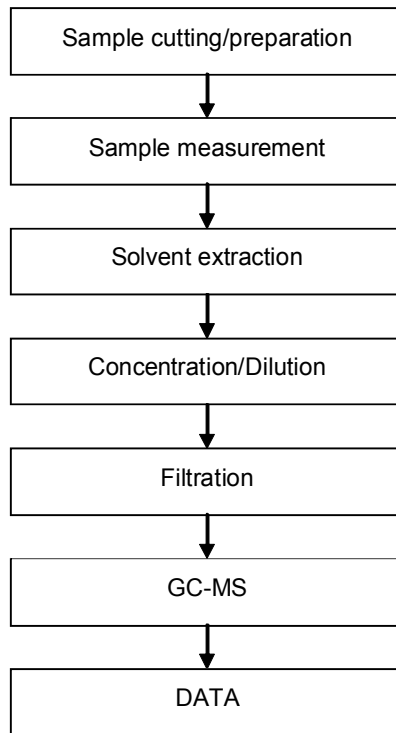
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Phthalates Testing Flow Chart

- 1) Name of the person who made testing: Elyn Yao
- 2) Name of the person in charge of testing: Myra Ma



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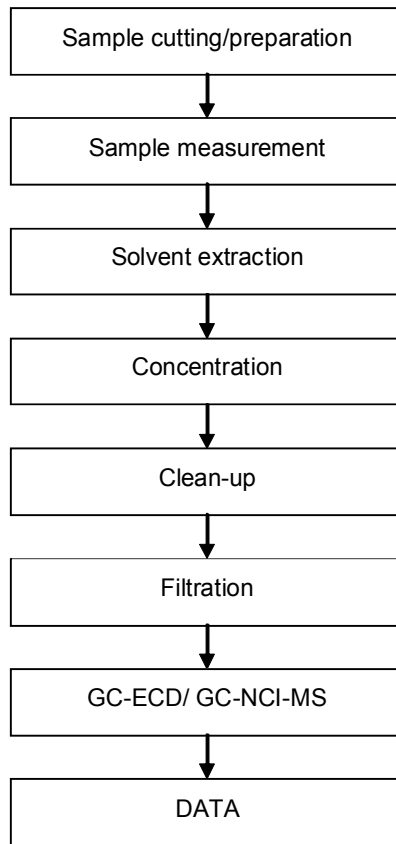
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SCCP/MCCP Testing Flow Chart

- 1) Name of the person who made testing: Brin Feng
- 2) Name of the person in charge of testing: Zirco Yu



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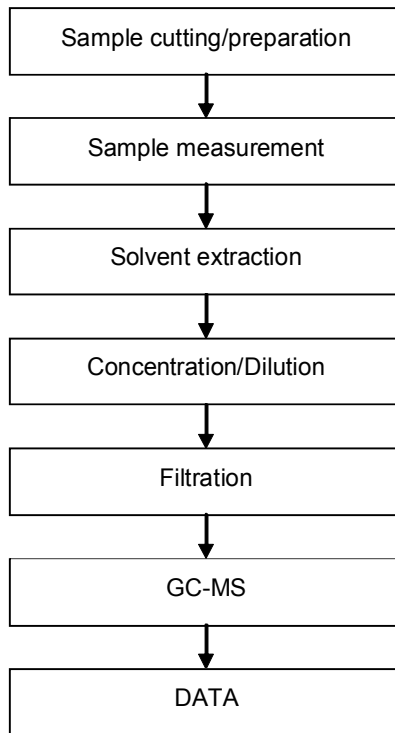
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HBCDD Testing Flow Chart

- 1) Name of the person who made testing: Gary Xu
- 2) Name of the person in charge of testing: Jessy Huang



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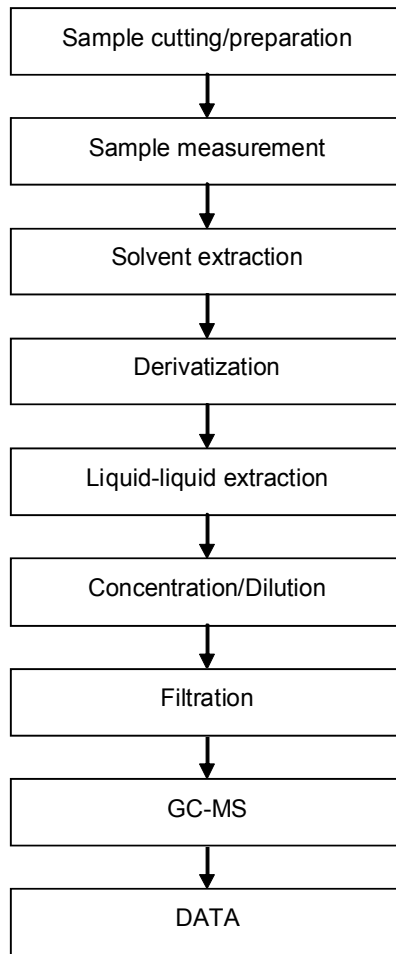
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TBBP-A Testing Flow Chart

- 1) Name of the person who made testing: Gary Xu
- 2) Name of the person in charge of testing: Jessy Huang



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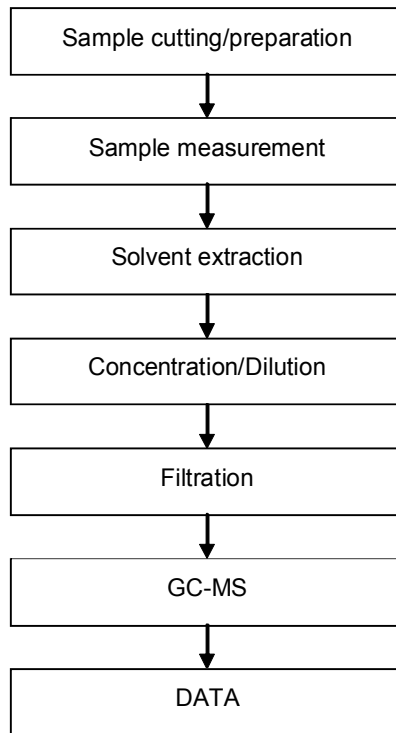
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DMF (Dimethyl fumarate) Testing Flow Chart

- 1) Name of the person who made testing: Lisa Duan
- 2) Name of the person in charge of testing: Jessy Huang



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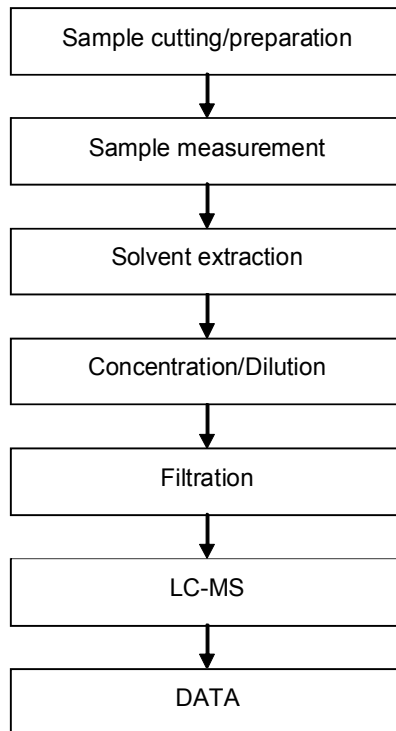
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PFOS/PFOA Testing Flow Chart

- 1) Name of the person who made testing: Tony Hu
- 2) Name of the person in charge of testing: Judy Li



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Test Report

No: 10326644(1)

Date: 07-Feb-14

Page 1 of 5

Heraeus Materials Singapore Pte Ltd
26 Pioneer Crescent #06-11/12 West Park Bizcentral Singapore 628558

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description : PbSn5Ag2.5(RM218) Solder Paste

Sample Receiving Date : 17-Jan-14
Testing Period : 20-Jan-14 to 07-Feb-14

Test Requested : In accordance with the RoHS Directive 2011/65/EU Annex II.

Test Result(s) : Please refer to next page(s).

Conclusion : Based on the performed tests on submitted sample(s), the results **comply with** the RoHS Directive 2011/65/EU Annex II ; recasting 2002/95/EC.

Signed for and on behalf of
SGS Testing & Control Services Singapore Pte Ltd

Y.C. Tham
Laboratory Manager

Test Location: 3 Toh Tuck Link, #01-02, Singapore 596228

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Member of SGS Group



Test Report

No: 10326644(1)

Date: 07-Feb-14

Page 2 of 5

Test Result(s):

Sample Description : PbSn5Ag2.5(RM218) Solder Paste

Test Item(s):	Unit	Method	Results	MDL	RoHS Limit
Cadmium(Cd)	mg/kg	With reference to IEC62321-5:2013. Analysis was performed by ICP/AES	n.d.	2	100
Lead (Pb)	mg/kg	With reference to IEC62321-5:2013. Analysis was performed by ICP/AES	917050.7 ⁺	2	1000
Mercury (Hg)	mg/kg	With reference to IEC62321-4:2013. Analysis was performed by ICP/AES	n.d.	2	1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC62321, Ed1:2008. Analysis was performed by UV/Vis Spectrometry	n.d.	2	1000
Sum of PBBs	mg/kg	With reference to IEC62321, Ed1:2008. Analysis was performed by GC/MS	n.d.	-	1000
Monobromobiphenyl	mg/kg		n.d.	5	-
Dibromobiphenyl	mg/kg		n.d.	5	-
Tribromobiphenyl	mg/kg		n.d.	5	-
Tetrabromobiphenyl	mg/kg		n.d.	5	-
Pentabromobiphenyl	mg/kg		n.d.	5	-
Hexabromobiphenyl	mg/kg		n.d.	5	-
Heptabromobiphenyl	mg/kg		n.d.	5	-
Octabromobiphenyl	mg/kg		n.d.	5	-
Nonabromobiphenyl	mg/kg		n.d.	5	-
Decabromobiphenyl	mg/kg		n.d.	5	-
Sum of PBDEs	mg/kg		n.d.	-	1000
Monobromodiphenyl ether	mg/kg		n.d.	5	-
Dibromodiphenyl ether	mg/kg		n.d.	5	-
Tribromodiphenyl ether	mg/kg		n.d.	5	-
Tetrabromodiphenyl ether	mg/kg		n.d.	5	-
Pentabromodiphenyl ether	mg/kg		n.d.	5	-
Hexabromodiphenyl ether	mg/kg		n.d.	5	-
Heptabromodiphenyl ether	mg/kg		n.d.	5	-
Octabromodiphenyl ether	mg/kg		n.d.	5	-
Nonabromodiphenyl ether	mg/kg	n.d.	5	-	
Decabromodiphenyl ether	mg/kg	n.d.	5	-	

Test Location: 3 Toh Tuck Link, #01-02, Singapore 596228

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- Note:
- (1) mg/kg = ppm ; 0.1wt% = 1000ppm
 - (2) n.d.= Not Detected
 - (3) MDL = Method Detection Limit
 - (4) "-" = Not regulated
 - (5) * : Exceeds limit

***Exemption: The received sample is exempted under directive 2011/65/EC Annex III Article 4(1): 7(a)lead in high melting temperature solder type solders (i.e. tin-lead solder alloys containing more than 85% of lead).**

Remarks: Sample received was totally dissolved by preconditioning method.

Lab Analyst(s): Jojo, Pheng and YC

Sample photo:

Sample Description : PbSn5Ag2.5(RM218) Solder Paste

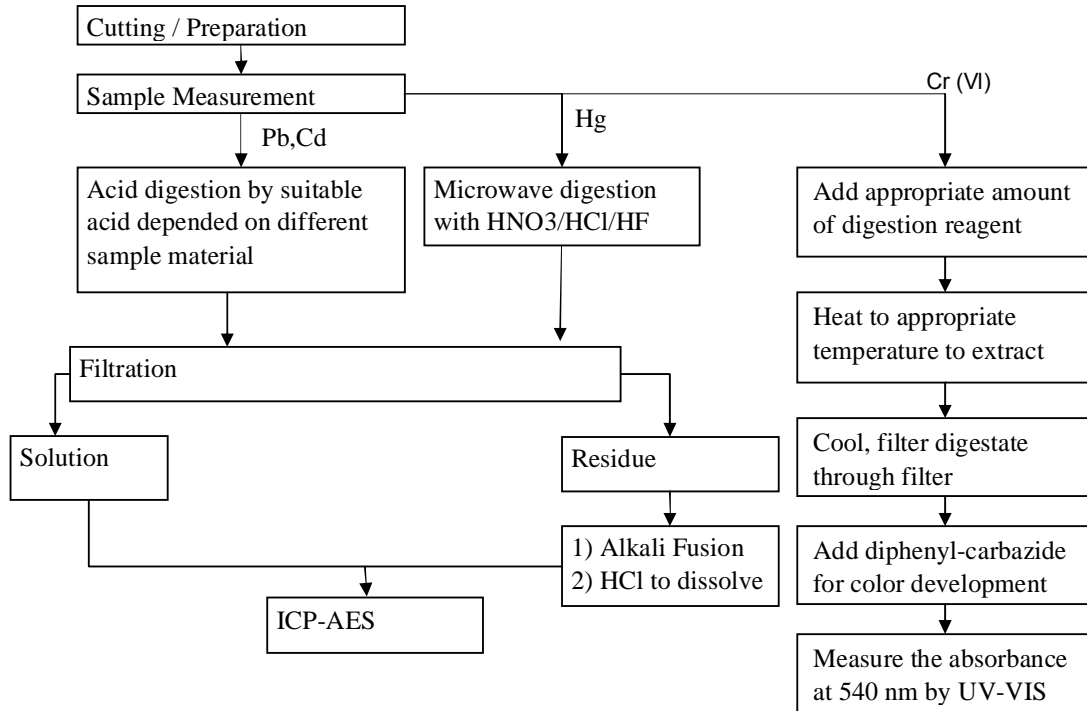
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Process Flow of IEC 62321 (Pb, Cd, Hg & Cr⁶⁺)



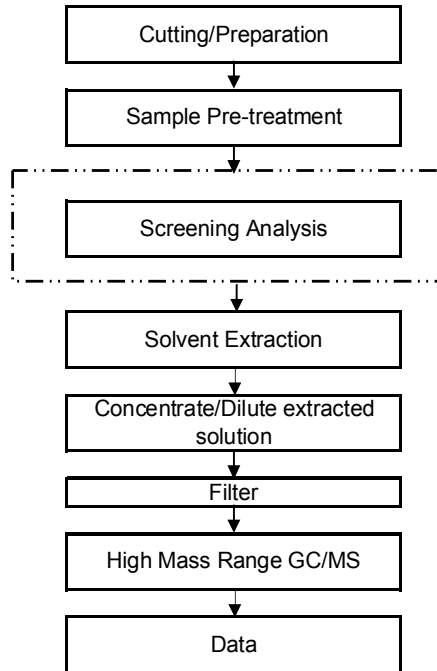
Remarks: Sample received was totally dissolved by preconditioning method. (CrVI method excluded)

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Process Flow of PBBs and PBDEs by GC/MS (IEC 62321)

First Testing Process → Optional screen process Confirmation process ...→



End of Report

Test Location: 3 Toh Tuck Link, #01-02, Singapore 596228

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Test Report

No. CANEC1320406713

Date: 08 Jan 2014

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YUNNAN TIN CO.,LTD.

49#MIDDLE OF CHANGYUAN ROAD,KUNMING NATIONAL HIGH&NEW TECH INDUSTRY DEVELOPMENT ZONE,KUNMING,YUNNAN CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : Tin Ingot

SGS Job No. : CP13-066989 - GZ
Model No. : Sn99.90AA
Client Ref. Info. : Tin Ingot,Tin Plate,Tin Stick,Tin Wire,Tin Bar,Tin Ball,Tin Hemisphere,Tin Granule,Tin Powder
Date of Sample Received : 27 Dec 2013
Testing Period : 27 Dec 2013 - 07 Jan 2014
Test Requested : Selected test(s) as requested by client.
Test Method : Please refer to next page(s).
Test Results : Please refer to next page(s).
Conclusion : Based on the performed tests on submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of
SGS-CSTC Ltd.

Merry Lv
Approved Signatory



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Guangzhou Testing Service Laboratory

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Member of the SGS Group (SGS SA)

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN13-204067.002	Silvery metal

Remarks :

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

RoHS Directive 2011/65/EU

- Test Method :
- (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
 - (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
 - (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
 - (4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by spot test / Colorimetric Method using UV-Vis.
 - (5) With reference to IEC 62321:2008, determination of PBBs and PBDEs by GC-MS.

Test Item(s)	Limit	Unit	MDL	002
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	59
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	-	-	◇	Negative
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND



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SGS (Shanghai) Technical Service Co., Ltd.
Shanghai Economic & Technological Development District

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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND

Notes :

(1) The maximum permissible limit is quoted from directive 2011/65/EU, Annex II

(2)◇Spot-test:

Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;

(The tested sample should be further verified by boiling-water-extraction method if the spot test result is Negative or cannot be confirmed.)

◇Boiling-water-extraction:

Negative = Absence of CrVI coating

Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

Halogen

Test Method : With reference to EN 14582: 2007, analysis was performed by Ion Chromatograph (IC).

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Fluorine (F)	mg/kg	50	ND
Chlorine (Cl)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND

Hexabromocyclododecane (HBCDD)

Test Method : Determination of HBCDD by GC-MS based on IEC 62321:2008.



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<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

Notes :

- (1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC:
Hexabromocyclododecane (HBCDD) is considered as a priority for risk evaluation and substance restriction.

Phthalate

Test Method : Determination of phthalates by GC-MS based on EN 14372:2004.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Dibutyl Phthalate (DBP)	84-74-2	%(W/W)	0.003	ND
Benzylbutyl Phthalate (BBP)	85-68-7	%(W/W)	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	%(W/W)	0.003	ND

Notes :

- (1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC:
Bis (2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP) and Dibutyl phthalate (DBP) are considered as a priority for risk evaluation and substance restriction.



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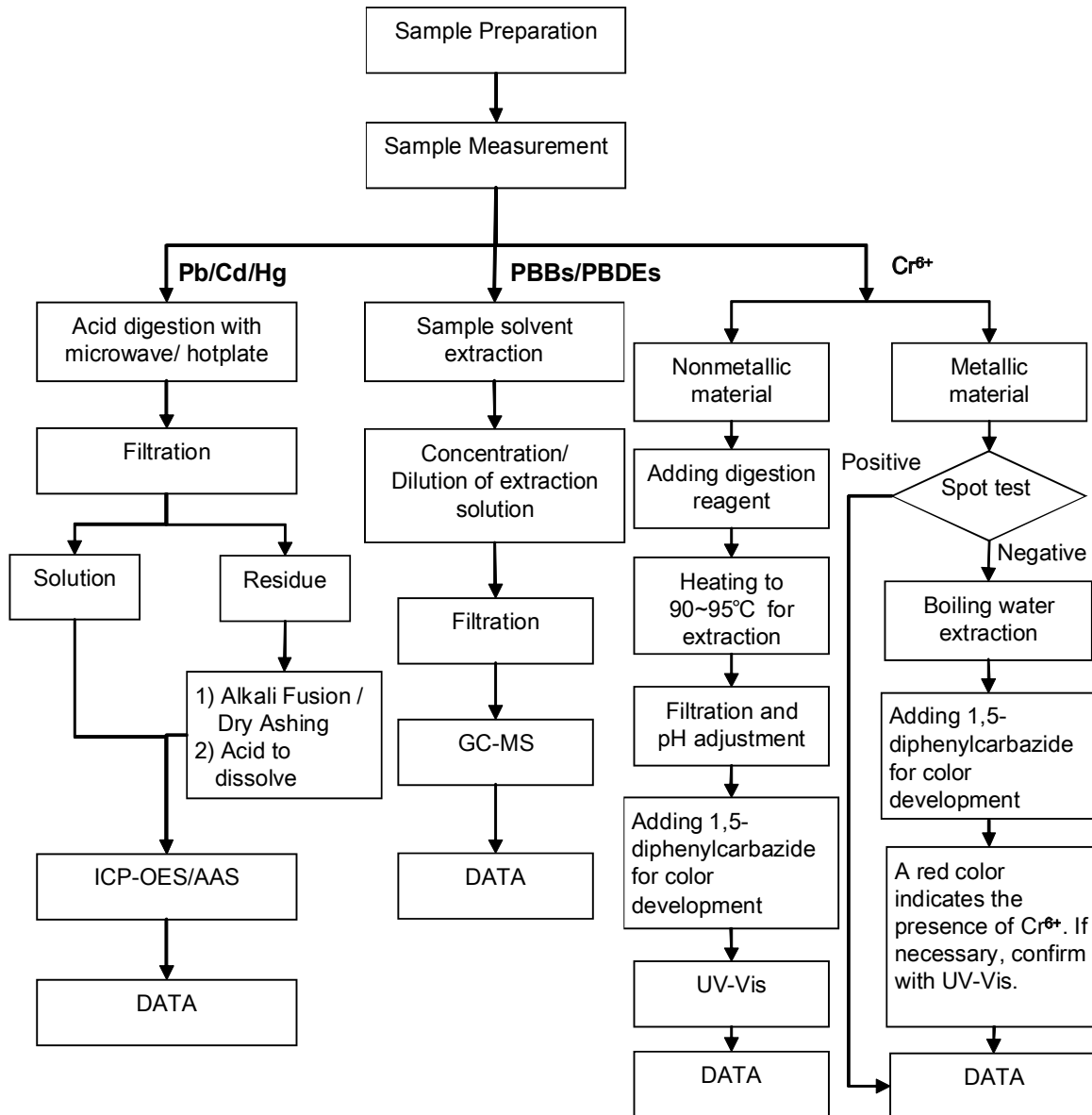
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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Michael Tso / Cutey Yu
- 2) Name of the person in charge of testing: Adams Yu / Yolanda Wei
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart (Cr⁶⁺ and PBBs/PBDEs test method excluded).



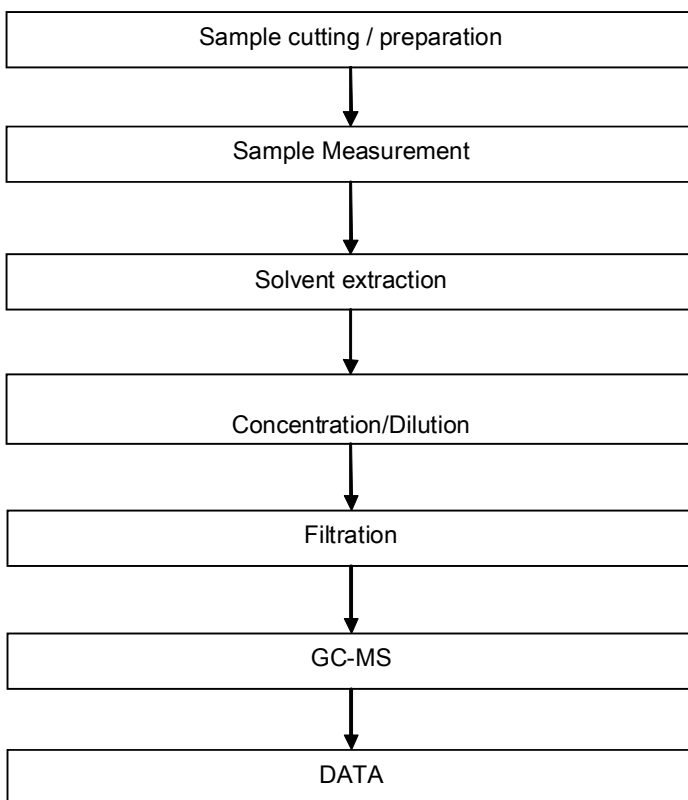
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Phthalates Testing Flow Chart

- 1) Name of the person who made testing: Liu Qiong
- 2) Name of the person in charge of testing: Yolanda Wei

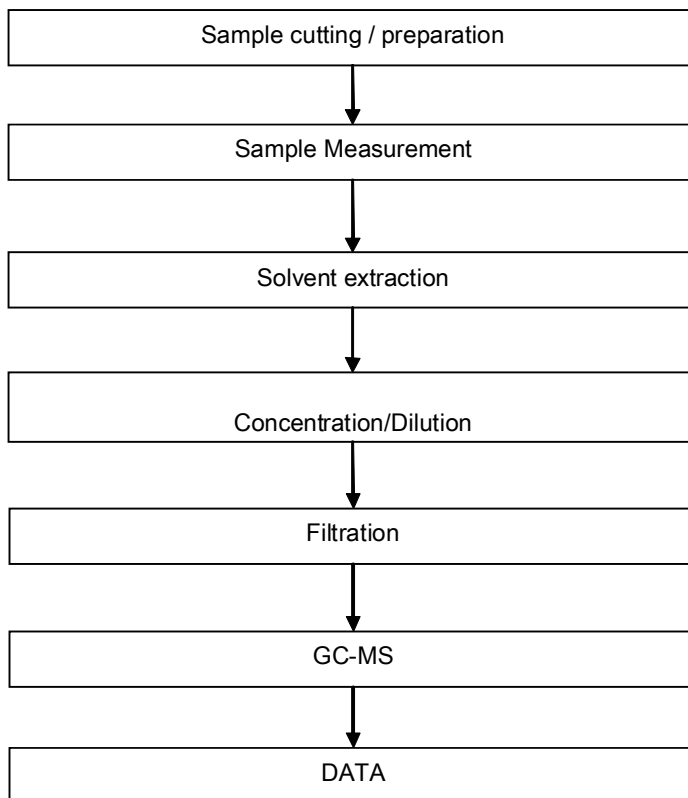


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HBCDD Testing Flow Chart

- 1) Name of the person who made testing: Cutey Yu
- 2) Name of the person in charge of testing: Yolanda Wei



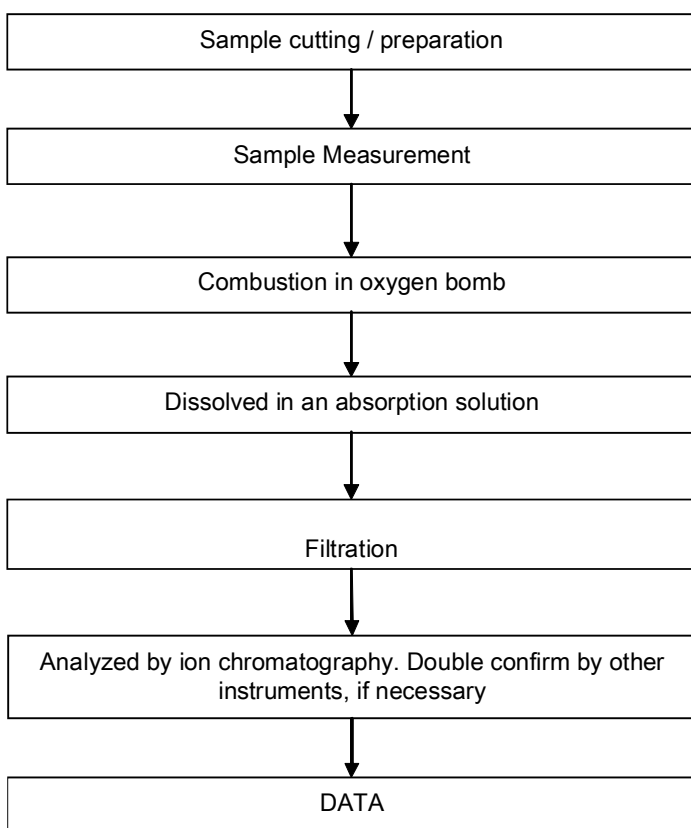
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Halogen Testing Flow Chart

- 1) Name of the person who made testing: Bella Wang
- 2) Name of the person in charge of testing: Adams Yu



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Sample photo:



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