



# TEST REPORT

## (시험성적서)

신청기관 (인) : 세원코리아  
Applicant : Sewonkorea Co., Ltd.

주소 (한글) : 인천광역시 남동구 영고개로697번길 97  
Address (Engl.) : 97, Aenggogae-ro 697beon-gil, Namdong-gu,  
Incheon, Korea

발행면수 (Page) : 1 of 13

발행일자 (Date) : 2015. 11. 11.

시험성적서 번호 (Report No.) : RT15R-S5058-K

시료 명세 : 시료에 대한 상세한 정보는 아래와 같음  
(Sample Description) (The following submitted sample(s) said to be)

제품명/형식 : Potassium Gold Cyanide  
(Name/Type of Product) (Potassium Gold Cyanide)

시료고유번호 : RT15R-S5058  
(Sample ID No.) (RT15R-S5058)

제품 생산자/공급자 : 세원코리아  
(Manufacturer/Vendor) (Sewonkorea Co., Ltd.)

시료접수일자 : 2015. 11. 05.  
(Sample received) (Nov. 05, 2015)

시험일자 : 2015. 11. 05. ~ 2015. 11. 11.  
(Testing Date) (Nov. 05, 2015 ~ Nov. 11, 2015)

시험유형 : RoHS 화학분석  
(Test Type) (RoHS wet chemical analysis)

시험방법 : 이 시험성적서의 다음 페이지 첨부  
(Test Method) (Please see the following page)

시험결과 : 이 시험성적서의 다음 페이지 첨부  
(Test Result) (Please see the following page)

- 비고 (Notes) : 1. 이 시험성적서는 제시된 시료 및 시료명으로 시험한 결과로서 유사 대상시료에 적용할 수 없음.  
(The test results presented in this report relate only to the object tested.)  
2. 이 시험성적서는 승인없이 복사 사용을 금함.  
(This report shall not be reproduced except in full without the written approval of the testing laboratory.)

승인자 (Approved by)

권한자 (Authorized by)

장준용/기술책임자  
(Jade Jang / Lab. Technical Manager)

박병옥/소장  
(Bo Park / Lab. General Manager)



Authenticity check

Intertek Testing Services Korea Ltd.

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발행일자 (Date) : 2015. 11. 11.

시험성적서 번호 (Report No.) : RT15R-S5058-K

시료고유번호 (Sample ID No.) : RT15R-S5058

시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

시험항목 (Test Item)	단위 (Unit)	분석방법 (Test Method)	검출한계 (MDL)	시험결과 (Result)
카드뮴 (Cadmium, Cd)	mg/kg	With reference to IEC 62321-5 Edition 1.0 : 2013, by acid digestion and determined by ICP-OES	0.5	N.D.
납 (Lead, Pb)	mg/kg	With reference to IEC 62321-5 Edition 1.0 : 2013, by acid digestion and determined by ICP-OES	5	N.D.
수은 (Mercury, Hg)	mg/kg	With reference to IEC 62321-4 Edition 1.0 : 2013, by acid digestion and determined by ICP-OES	2	N.D.
6가 크롬 (Hexavalent Chromium, Cr <sup>6+</sup> ) (For non-metal)	mg/kg	With reference to IEC 62321 Edition 1.0 : 2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1	N.D.

Tested by : Chanoh Kim, Hyojoo Kim

Notes : mg/kg = ppm = parts per million (함량 표시 : 백만분의 일)

< = Less than (결과 값 이하)

N.D. = Not detected (< MDL, 미검출 - 검출한계 이하)

MDL = Method detection limit (검출한계)

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시료고유번호 (Sample ID No.) : RT15R-S5058

시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

시험항목 (Test Item)	단위 (Unit)	분석방법 (Test Method)	검출한계 (MDL)	시험결과 (Result)
<b>폴리브로민화비페닐 (Polybrominated Biphenyls, PBBs)</b>				
모노브로모비페닐 (MonoBB)	mg/kg	With reference to IEC 62321-6 Edition 1.0 : 2015, by solvent extraction and determined by GC/MS	5	N.D.
다이브로모비페닐 (DiBB)	mg/kg		5	N.D.
트라이브로모비페닐 (TriBB)	mg/kg		5	N.D.
테트라브로모비페닐 (TertaBB)	mg/kg		5	N.D.
펜타브로모비페닐 (PentaBB)	mg/kg		5	N.D.
헥사브로모비페닐 (HexaBB)	mg/kg		5	N.D.
헵타브로모비페닐 (HeptaBB)	mg/kg		5	N.D.
옥타브로모비페닐 (OctaBB)	mg/kg		5	N.D.
노나브로모비페닐 (NonaBB)	mg/kg		5	N.D.
데카브로모비페닐 (DecaBB)	mg/kg		5	N.D.
<b>폴리브로민화디페닐에테르 (Polybrominated Diphenyl Ethers, PBDEs)</b>				
모노브로모디페닐에테르 (MonoBDE)	mg/kg	With reference to IEC 62321-6 Edition 1.0 : 2015, by solvent extraction and determined by GC/MS	5	N.D.
다이브로모디페닐에테르 (DiBDE)	mg/kg		5	N.D.
트라이브로모디페닐에테르 (TriBDE)	mg/kg		5	N.D.
테트라브로모디페닐에테르 (TetraBDE)	mg/kg		5	N.D.
펜타브로모디페닐에테르 (PentaBDE)	mg/kg		5	N.D.
헥사브로모디페닐에테르 (HexaBDE)	mg/kg		5	N.D.
헵타브로모디페닐에테르 (HeptaBDE)	mg/kg		5	N.D.
옥타브로모디페닐에테르 (OctaBDE)	mg/kg		5	N.D.
노나브로모디페닐에테르 (NonaBDE)	mg/kg		5	N.D.
데카브로모디페닐에테르 (DecaBDE)	mg/kg		5	N.D.

Tested by : Hyoji Lee

Notes : mg/kg = ppm = parts per million (함량 표시 : 백만분의 일)

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발행일자 (Date) : 2015. 11. 11.

시험성적서 번호 (Report No.) : RT15R-S5058-K

시료고유번호 (Sample ID No.) : RT15R-S5058

시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

시험항목 (Test Item)	단위 (Unit)	분석방법 (Test Method)	검출한계 (MDL)	시험결과 (Result)
브롬 (Bromine, Br)	mg/kg	With reference to ASTM D7359, determined by combustion IC (CIC)	30	N.D.
염소 (Chlorine, Cl)	mg/kg	With reference to ASTM D7359, determined by combustion IC (CIC)	30	N.D.
플루오르 (Fluorine, F)	mg/kg	With reference to ASTM D7359, determined by combustion IC (CIC)	30	N.D.
요오드 (Iodine, I)	mg/kg	With reference to ASTM D7359, determined by combustion IC (CIC)	30	N.D.
은 (Silver, Ag)	mg/kg	With reference to US EPA 3052, by acid digestion and determined by ICP-OES	2	N.D.
베릴륨 (Beryllium, Be)	mg/kg	With reference to US EPA 3052, by acid digestion and determined by ICP-OES	2	N.D.
코발트 (Cobalt, Co)	mg/kg	With reference to US EPA 3052, by acid digestion and determined by ICP-OES	2	N.D.
크롬 (Chromium, Cr)	mg/kg	With reference to US EPA 3052, by acid digestion and determined by ICP-OES	2	N.D.

Tested by : Dahye Lim, Jooyeon Lee

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발행일자 (Date) : 2015. 11. 11.

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시료고유번호 (Sample ID No.) : RT15R-S5058

시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

시험항목 (Test Item)	단위 (Unit)	분석방법 (Test Method)	검출한계 (MDL)	시험결과 (Result)
구리 (Copper, Cu)	mg/kg	With reference to US EPA 3052, by acid digestion and determined by ICP-OES	2	N.D.
철 (Iron, Fe)	mg/kg	With reference to US EPA 3052, by acid digestion and determined by ICP-OES	2	N.D.
니켈 (Nickel, Ni)	mg/kg	With reference to US EPA 3052, by acid digestion and determined by ICP-OES	2	N.D.
안티몬 (Antimony, Sb)	mg/kg	With reference to US EPA 3052, by acid digestion and determined by ICP-OES	2	N.D.
아연 (Zinc, Zn)	mg/kg	With reference to US EPA 3052, by acid digestion and determined by ICP-OES	2	N.D.
헥사브로모시클로도데칸 (Hexabromocyclododecane, HBCDD)	mg/kg	With reference to US EPA 3540C, by solvent extraction and determined by GC/MS	10	N.D.

Tested by : Jooyeon Lee, Jessica Kang

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시료고유번호 (Sample ID No.) : RT15R-S5058

시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

시험항목 (Test Item)	단위 (Unit)	분석방법 (Test Method)	검출한계 (MDL)	시험결과 (Result)
<b>프탈레이트 (Phthalates)</b>				
디부틸프탈레이트 (Dibutyl phthalate, DBP)	mg/kg	With reference to US EPA 8061A, by solvent extraction and determined by GC/MS	50	N.D.
디에틸헥실프탈레이트 (Di(2-ethylhexyl) phthalate, DEHP)	mg/kg	With reference to US EPA 8061A, by solvent extraction and determined by GC/MS	50	N.D.
디엔옥틸프탈레이트 (Di-n-octyl phthalate, DNOP)	mg/kg	With reference to US EPA 8061A, by solvent extraction and determined by GC/MS	50	N.D.
디이소노닐프탈레이트* (Diisononyl phthalate, DINP)	mg/kg	With reference to US EPA 8061A, by solvent extraction and determined by GC/MS	100	N.D.
디이소데실프탈레이트** (Diisodecyl phthalate, DIDP)	mg/kg	With reference to US EPA 8061A, by solvent extraction and determined by GC/MS	100	N.D.
벤질부틸프탈레이트 (Benzyl butyl phthalate, BBP)	mg/kg	With reference to US EPA 8061A, by solvent extraction and determined by GC/MS	50	N.D.
디이소부틸프탈레이트 (Diisobutyl phthalate, DIBP)	mg/kg	With reference to US EPA 8061A, by solvent extraction and determined by GC/MS	50	N.D.
디메틸프탈레이트 (Dimethyl phthalate, DMP)	mg/kg	With reference to US EPA 8061A, by solvent extraction and determined by GC/MS	50	N.D.
디에틸프탈레이트 (Diethyl phthalate, DEP)	mg/kg	With reference to US EPA 8061A, by solvent extraction and determined by GC/MS	50	N.D.

Tested by : Misun Lee

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 MDL = Method detection limit (검출한계)

\* DINP include two types of phthalate (CAS No. 68515-48-0 and 28553-12-0).

\*\* DIDP include two types of phthalate (CAS No. 68515-49-1 and 26761-40-0).

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발행일자 (Date) : 2015. 11. 11.

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시료고유번호 (Sample ID No.) : RT15R-S5058

시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

시험항목 (Test Item)	단위 (Unit)	분석방법 (Test Method)	검출한계 (MDL)	시험결과 (Result)
퍼플루오로옥타노익에시드 (Perfluorooctanoic acid, PFOA)	mg/kg	With reference to US EPA 3550C & 8321B, by ultrasonic extraction and determined by LC/MS/MS	0.1	N.D.
퍼플루오로옥탄설포네이트 (Perfluorooctane sulfonate, PFOS)	mg/kg	With reference to US EPA 3550C & 8321B, by ultrasonic extraction and determined by LC/MS/MS	0.1	N.D.

Tested by : Shirley Park

Notes : mg/kg = ppm = parts per million (함량 표시 : 백만분의 일)  
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 N.D. = Not detected (< MDL, 미검출 - 검출한계 이하)  
 MDL = Method detection limit (검출한계)

\* 시료 접수 시 시료 상태 :  
(View of sample as received)



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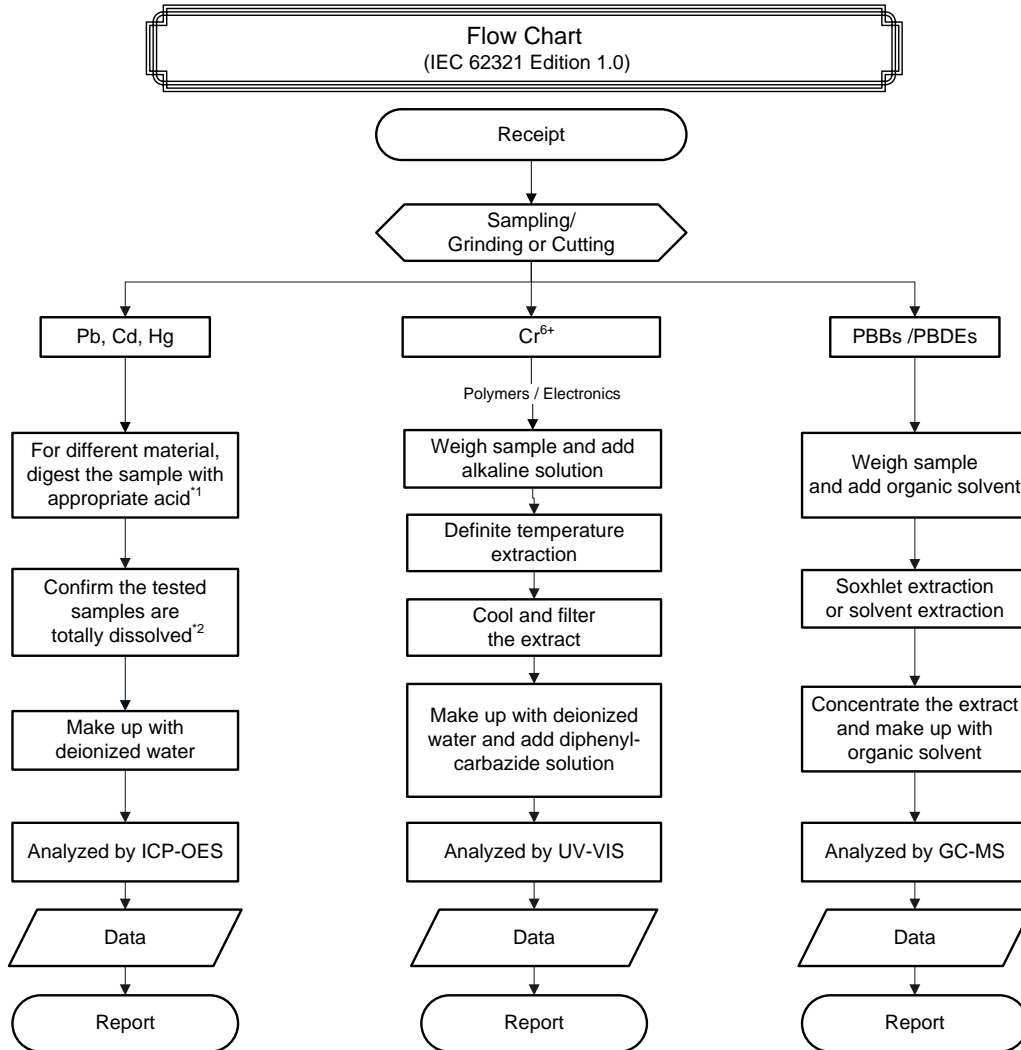
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시험성적서 번호 (Report No.) : RT15R-S5058-K

시료고유번호 (Sample ID No.) : RT15R-S5058

시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)



Remarks :

\*1 : List of appropriate acid :

Material	Acid added for digestion
Polymers	HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCl, HF
Electronics	HNO <sub>3</sub> , HCl, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

\*2 : The samples were dissolved totally by pre-conditioning method according to above flow chart.



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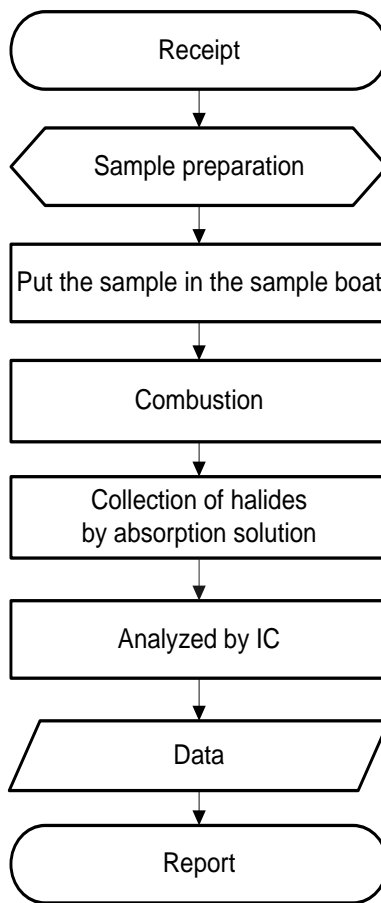
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시료고유번호 (Sample ID No.) : RT15R-S5058

시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

## Flow Chart (Halogen)



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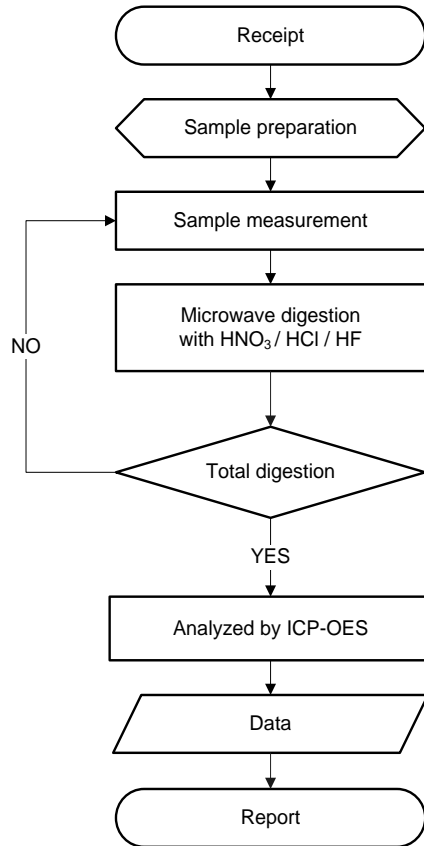
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시료고유번호 (Sample ID No.) : RT15R-S5058

시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

## Flow Chart (Metal Testing)



\*\* 비고 : 이 샘플은 위의 흐름도에 따른 전처리 방법에 의해 완전용해 되었음.  
(The samples were dissolved totally by pre-conditioning method according to above flow chart.)

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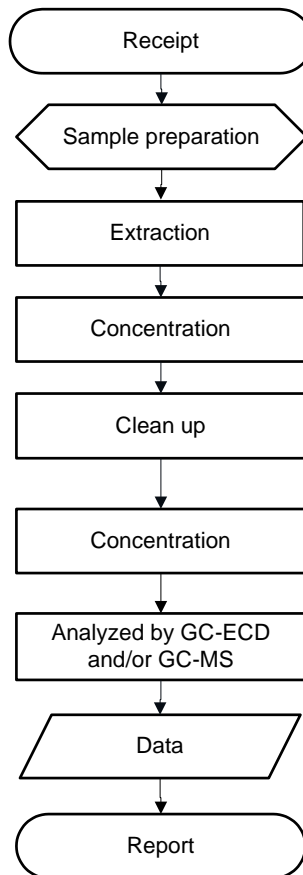
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시료고유번호 (Sample ID No.) : RT15R-S5058

시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

## Flow Chart (EPA 3540C)



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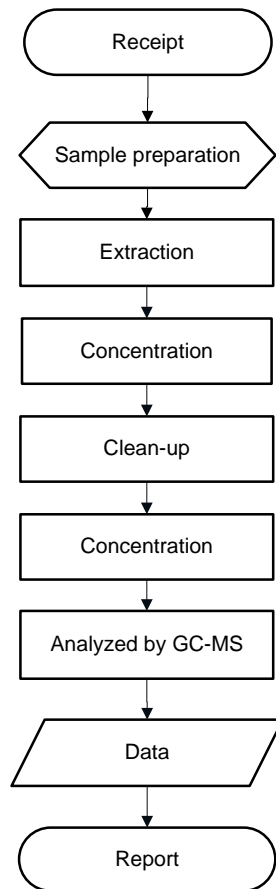
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시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

## Flow Chart (Phthalates)



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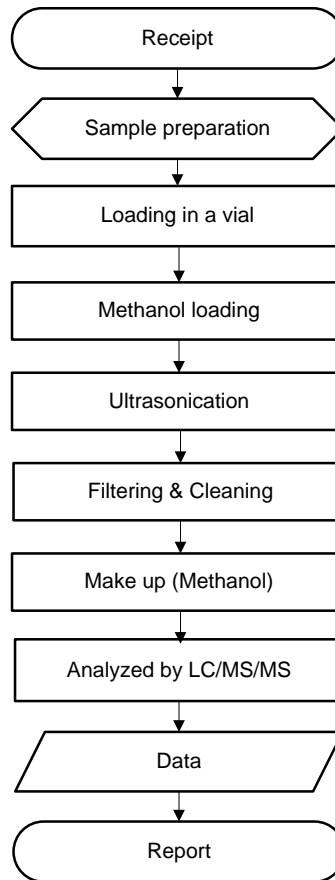
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시료명 (Sample Description) : Potassium Gold Cyanide  
(Potassium Gold Cyanide)

### Flow Chart (PFOS, PFOA)



\*\*\*\*\* End of Report \*\*\*\*\*

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