

제273호 (1/4)

## 국제공인시험기관인증서

기 관 명 : (주)엘지화학 기술연구원

대 표 자 : 김 반 석

법 인 등 록 번 호 : 110111-2207995

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법 인 주 소 : 서울특별시 영등포구 여의도동 20

사 업 장 소 재 지 : 대전광역시 유성구 문지동 104-1

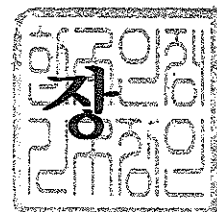
유효 기 간 : 2010년 6월 9일 ~ 2014년 6월 8일

인정분야 및 범위 : 별첨 참조

상기 시험기관을 KS Q ISO/IEC 17025:2006 인정요건 및 국가표준기본법 제23조의 규정에 의거하여 국제공인시험기관으로 인정합니다. 또한 ISO-ILAC-IAF 공동성명(2009.1.8)에 언급된 바와 같이 인정된 분야 및 범위에 대한 기술적 능력과 시험기관 품질경영시스템이 적절함을 인정합니다.

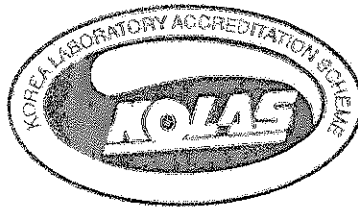
2011년 8월 10일

한 국 인 정 기 구



“이면사항기재”

1. 2005. 12. 20 : 최초인정
2. 2006. 03. 27 : 대표자 변경 (노기호 → 김반석)
3. 2008. 04. 15 : 인정분야 변경(2.008 기타 재료 및 제품(건축자재) 폐지).
4. 2008. 09. 02 : 인정서 변경
5. 2010. 06. 09 : 갱신인정
6. 2010. 12. 17 : 추가인정(IEC 62321:2008 등 6개 규격)
7. 2011. 08. 10 : 추가인정[2.025 기타환경(1개 규격)]

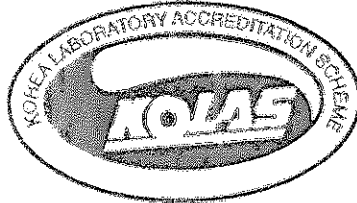


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## 2. 화학시험

2.016 기타 석유제품

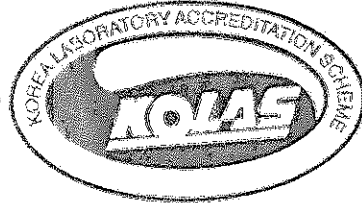
규격번호	규격명	시험범위 및 검출한계
BS EN 1122 : 2001 (ICP-OES)	Plastics - Determination of cadmium - wet decomposition method / Method B	2 mg/kg
KOI-0024-0k (In-house method) IEC 62321 Ed 1 (111/54/CDV):2006와 EPA 3052:1996를 준용한 자체개발규격	플라스틱 중 Pb, Cr분석법	Pb : 5 mg/kg Cr : 2 mg/kg
KOI-0025-0k (In-house method) EPA 7473:2007를 준용한 자체개발규격	플라스틱 중 Hg 분석법	1 mg/kg
KOI-0026-0k (In-house method) IEC 62321 Ed 1 (111/54/CDV):2006와 EPA 3550B:1996를 준용한 자체개발규격	플라스틱 중 PBBs/PBDEs 의 GC/MS에 의한 분석법	5 mg/kg



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2.025 기타환경

규격번호	규격명	시험범위 및 검출한계
IEC 62321:2008	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) 7 Determination of mercury in polymers by CV-AAS, CVAFS, ICP-OES and ICP-MS	4 mg/kg
IEC 62321:2008	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) 8 Determination of lead and cadmium in polymers by ICP-OES, ICP-MS and AAS	10 mg/kg
IEC 62321:2008	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) Annex A (informative) Determination of PBB and PBDE in polymers by GC-MS	2 mg/kg
IEC 62321:2008	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) Annex C (Informative) Determination of hexavalent chromium (Cr(VI)) in polymers and electronics by the colorimetric method	5 mg/kg
KSC IEC 62321:2009	전기전자제품 - 6가지 규제물질(납, 수은, 카드뮴, 6가 크로뮴, PBBs, PBDEs)의 함량 측정 7 CV-AAS, AFS, ICP-OES/MS에 의한 고분자 중 수은 측정방법	4 mg/kg
KSC IEC 62321:2009	전기전자제품 - 6가지 규제물질(납, 수은, 카드뮴, 6가 크로뮴, PBBs, PBDEs)의 함량 측정 8 ICP-OES/MS 및 AAS에 의한 고분자 재료 중 납, 카드뮴 정량방법	10 mg/kg

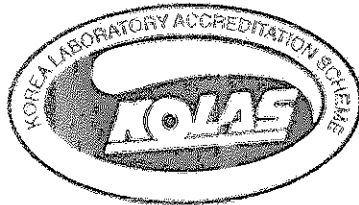


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2.025 기타환경(계속)

규격번호	규격명	시험범위 및 검출한계
KSC IEC 62321:2009	전기전자제품 - 6가지 규제물질(납, 수은, 카드뮴, 6가 크로뮴, PBBs, PBDEs)의 함량 측정 부속서 A(참고) 고분자에서 GC-MS를 이용한 PBB, PBDE 정량	2 mg/kg
KSC IEC 62321:2009	전기전자제품 - 6가지 규제물질(납, 수은, 카드뮴, 6가 크로뮴, PBBs, PBDEs)의 함량 측정 부속서 C(참고) 비색법에 의한 고분자와 전자제품 에서의 6가 크로뮴의 검출	5 mg/kg
KS M 0180:2009	산화 열 가수분해 후 이온 크로마토그래프 검출에 의한 할로젠(F, Cl, Br) 및 황의 시험방법 (할로젠(F, Cl, Br))	Cl : 3.2 mg/kg Br : 3.5 mg/kg F : 2.6 mg/kg

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## CERTIFICATE OF ACCREDITATION

Name of Laboratory : LG Chem Ltd./ Research Park

Representative : Bahn-suk Kim

Address of Headquarters : 20, Yeouido-dong, Yeongdeungpo-gu, Seoul, Korea

Address of Laboratory : 104-1, Moonji-dong, Yuseong-gu, Daejeon, Korea

Duration : June 9, 2010 ~ June 8, 2014

Scope of Accreditation

(Scope of Accreditation is described in the accompanying Annex)

This testing laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025 : 2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated 8 January 2009).

August 10, 2011

**Administrator,**

**Korea Laboratory Accreditation Scheme(KOLAS)**

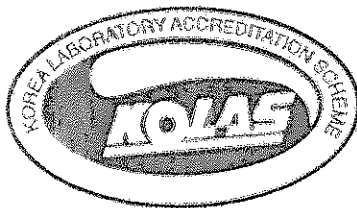


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## **2. Chemical Test**

### 2.016 Other Petroleum Products (Plastic)

Test method	Standard designation	Test range or Limits of detection
BS EN 1122 : 2001 (ICP-OES)	Plastics - Determination of cadmium - wet decomposition method / Method B	2 mg/kg
KOI-0024-0k (In-house method in compliance with IEC 62321 Ed 1 (111/54/CDV):2006 and EPA 3052:1996)	Determination of Lead(Pb) and Hexavalent Chromium(Cr(VI)) in Plastic	Pb : 5 mg/kg Cr : 2 mg/kg
KOI-0025-0k (In-house method in compliance with EPA 7473:2007)	Determination of Mercury(Hg) in Plastic	1 mg/kg
KOI-0026-0k (In-house method in compliance with IEC 62321 Ed 1 (111/54/CDV):2006 and EPA 3550B:1996)	Determination of PBB/PBDE in Plastic	5 mg/kg

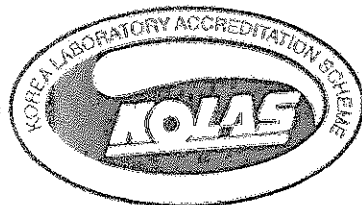


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2.025 Other Environment

Test method	Standard designation	Test range or Limits of detection
IEC 62321:2008	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) 7 Determination of mercury in polymers by CV-AAS, CVAFS, ICP-OES and ICP-MS	4 mg/kg
IEC 62321:2008	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) 8 Determination of lead and cadmium in polymers by ICP-OES, ICP-MS and AAS	10 mg/kg
IEC 62321:2008	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) Annex A (informative) Determination of PBB and PBDE in polymers by GC-MS	2 mg/kg
IEC 62321:2008	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) <b>Annex C</b> (Informative) Determination of hexavalent chromium (Cr(VI)) in polymers and electronics by the colorimetric method	5 mg/kg





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2.025 Other Environment(Cont.)

Test method	Standard designation	Test range or Limits of detection
KSC IEC 62321:2009	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) 7 Determination of mercury in polymers by CV-AAS, CVAFS, ICP-OES and ICP-MS	4 mg/kg
KSC IEC 62321:2009	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) 8 Determination of lead and cadmium in polymers by ICP-OES, ICP-MS and AAS	10 mg/kg
KSC IEC 62321:2009	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) Annex A (informative) Determination of PBB and PBDE in polymers by GC-MS	2 mg/kg
KSC IEC 62321:2009	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers) Annex C (Informative) Determination of hexavalent chromium (Cr(VI)) in polymers and electronics by the colorimetric method	5 mg/kg
KS M 0180:2009	Standard test method for halogen(F, Cl, Br) and sulfur content by oxidative pyrohydrolytic combustion followed by ion chromatography detection (Combustion ion chromatography-CIC) (Halogen F, Cl, Br)	Cl : 3.2 mg/kg Br : 3.5 mg/kg F : 2.6 mg/kg

End.