

# TORY Co.,Ltd

## Company & Production Introduction

Dec. 19. 2016.

# Contents

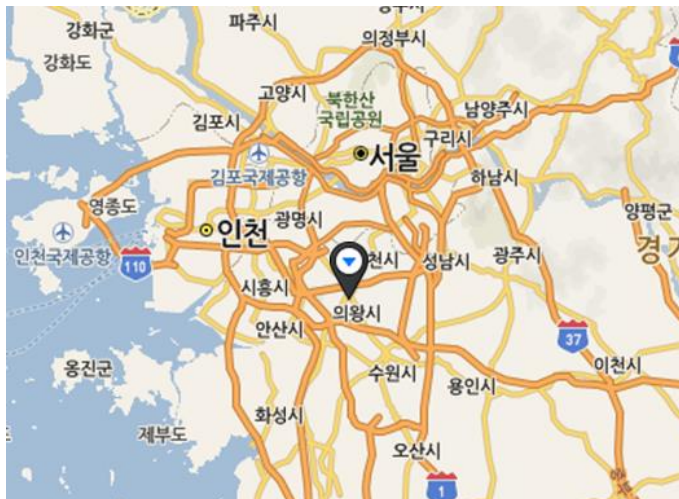
- Company Overview
- Organization chart
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- Production
- Attached documents

The world's  
first three way  
hydrogen generator

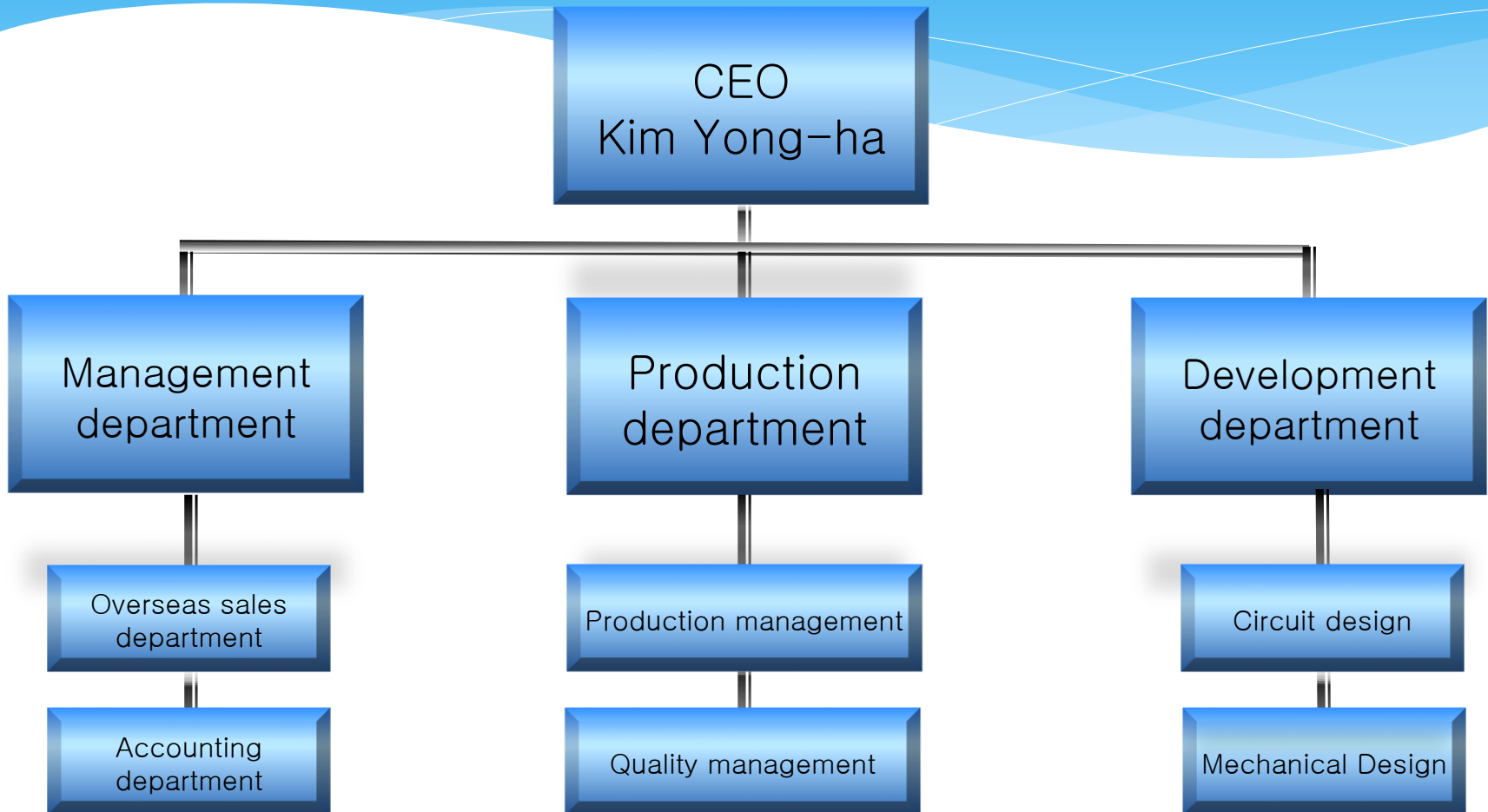


# 1. Company Overview

<b>Company name</b>	<b>TORY Co.,Ltd</b>	<b>CEO</b>	<b>Kim Yong-ha</b>
<b>Date of establishment</b>	<b>2016.03.11.</b>	<b>Business information</b>	<b>hydrogen generator development and producing and export</b>
<b>address</b>	<b>5F,Remote Solution Building, 68, 140beon-gil, Gongdan-ro, Gunpo-si, Gyeonggi-do, KOREA</b>		
<b>Sales of 2016</b>	<b>900,000,000 KRW</b>		
<b>Home Page</b>	<a href="http://www.tory-co.kr"><u>www.tory-co.kr</u></a>		



## 2. Organization chart



# 3. Business background

**As people get older, they become wrinkles, aging, and diseases.  
What caused the problem?**

**Did you know that the culprit is due to the unnecessary active oxygen inside the human body?**

## What is active oxygen?

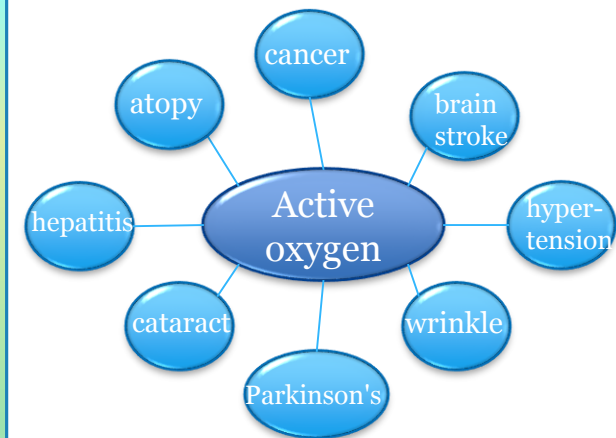
Active oxygen is the oxygen in a strong unstable state of oxidizing power.

It occurs during the biological defense process to remove pathogens and foreign matter.

Although active oxygen sometimes plays a role in protecting the human body, active oxygen, which is produced by overproduction of oxygen due to environmental pollution, chemical substances, ultraviolet ray, blood circulation disorder, stress, etc., oxidizes in the human body. As a result, cell membranes, DNA, and all other cell structures are damaged, and depending on the extent of damage, the cells lose their function or become altered.

Approximately 90% of modern human diseases are known to be associated with active oxygen. To prevent such diseases, it is necessary to eliminate the active oxygen in the body.

Antioxidants, which can remove active oxygen, such as vitamin E, vitamin C, uric acid, bilirubin, glutathione, carotene, etc. But there is a limit to ingesting these antioxidants in a natural way.



Is there any way to easily ingest harmless antioxidant substances?

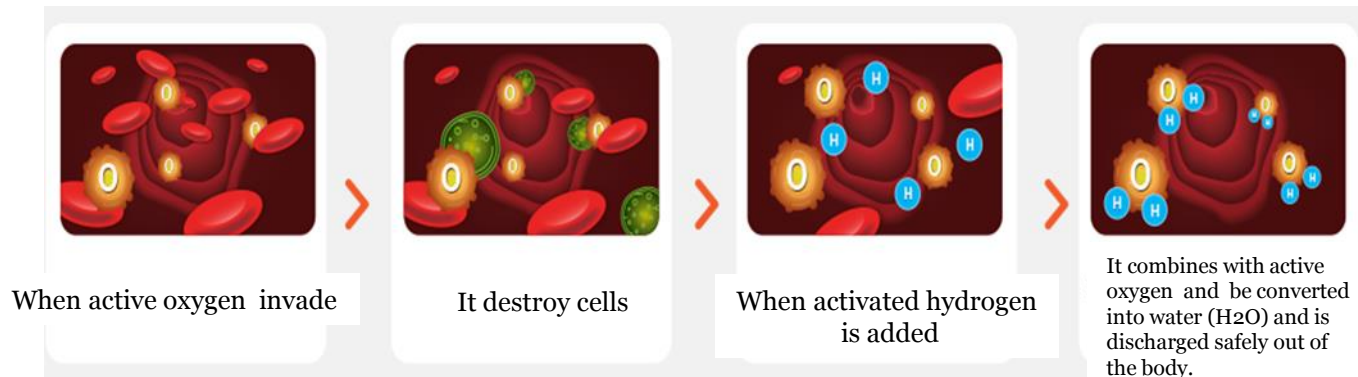


The correct answer is hydrogen( $H_2$ ).

More than 250 research results are available at the international journals level, such as 1997 BBRC, S.Shirahata, 2007 Nature Medicine, OTASIGEO, 2013 PLOS ONE, M.shin, etc. And studies such as clinical trials in Japan are expanding.

### ❖ The principle that hydrogen removes active oxygen

- Hydrogen has a very small molecular size, so it is strong in penetration. When hydrogen is ingested, it absorbs quickly into the human body, combines with active oxygen in the body, converts it into water, and discharges it to the outside of the body.
- Research shows that by removing active oxygen, hydrogen can prevent diseases such as adult diseases, stop disease progression, or treat diseases. It is also said that hydrogen has excellent effect on anti-aging and skin beauty.



# TORY WILL DO IT



The answer is  
hydrogen generator =>  
H<sub>2</sub> Noble α



## ➤ The components of the product:



▪ Body



▪ Cup



▪ Bath nozzle



▪ Mask



▪ Tube



▪ Bath tube



▪ Instruction manual



## ➤ Product specifications :



Production name	H <sub>2</sub> Noble α	Model name	TRJ-HG001
Size	body (mm)	136(W) X 246(D) X 311(H)	
	mask (m)	2	
	cup (mm)	86(R) X 175(H)	
	tube (m)	1	
Weight	body (g)	2,540	
	mask (g)	80	
	cup (g)	216	
	tube (g)	25	
Rated voltage	AC100V/220V, 50/60Hz		
Maximum power consumption	50W		
The capacity of Distilled water tank	MAX(ml)	870	
	MIN ~ MAX(ml)	466	

## ➤ Technology

- The purity of the hydrogen generating( 99.99%)  
Concentration of inhaled hydrogen (2-3 %)  
This is the highest level of Japanese hydrogen generator industry
- High precision of electrode junction technology and high uniformity of hydrogen generation technology.
- Low voltage high current circuit technology (constant current control circuit technology)

## ➤ Marketability

- The hydrogen-related market in Japan is expected to reach 200 billion won in 2013 and 250 billion won in 2014.  
(Japanese hydrogen-related market, Health Industry Newspaper No. 1506 in 2013)
- Expansion of the Japanese market is underway (3rd order, production, delivery completed, 11/25)
- In order to further expand our overseas customers, we have created a product proposal and are now working on pioneering new buyers.

## 4 . Production -- $H_2$ Noble $\alpha$

### The three way hydrogen generator!

- ❖ 100% Developed and manufactured in Korea.
- ❖ three functions in one product : Hydrogen gas inhalation, hydrogen water making and hydrogen bath.
- ❖ It is in mass production and being exported to Japan.  
PSE certification of Japan Electrical Product Safety Mark has been Acquired.
- ❖ High hydrogen concentration has been achieved.



# 4-1. Hydrogen generator H<sub>2</sub> Noble $\alpha$ – Hydrogen gas maker –

- \* Inhaling hydrogen gas~
- \* People can take hydrogen molecule by three way. There are Inhaling, drinking and penetration. Inhaling the hydrogen gas is the most direct way and it is also the way exactly effective .
- \* H<sub>2</sub> Noble  $\alpha$  can produce high purity of hydrogen gas by electrolyzing purified water.
- \* You can use dedicated hydrogen inhalation mask to inhale fresh hydrogen gas from hydrogen generator.
- \* The Hydrogen gas can be produced in 100ml per minute and high hydrogen concentration has been achieved.



# 4-2. Hydrogen generator H<sub>2</sub> Noble α- Hydrogen water maker-

- \* Drinking hydrogen water~
- \* H<sub>2</sub> Noble α can produce high purity of hydrogen gas by electrolysis of purified water, and dissolve hydrogen in various beverages.
- \* You can easily intake hydrogen by drinking water with enough hydrogen molecules. At the same time you can also have your daily water supply.
- \* The water, tea and even the juice what you preferred can be simply turned into a hydrogen drink.



# 4-3. Hydrogen generator H<sub>2</sub> Noble

## $\alpha$

### – Hydrogen bath maker –

- \* Enjoy hydrogen water bath~
- \* Using a bath nozzle (sold separately), you can even enjoy hydrogen bath at home! By dissolving hydrogen in bath water, you can simply enjoy hydrogen water bath and take hydrogen into your whole body.
- \* You can relax your body by hydrogen water bath. Hydrogen molecules will penetrate all over the body.
- \* It is good for fatigue recovery, blood circulation and activation of metabolism by promoting blood flow and increasing body temperature.
- \* So beauty and diet effects are expected. It is said to be especially effective for skin diseases such as atopy.



## 5. Attached documents

1. Business registration certificate
2. Factory registration certificate
3. PSE certificate
4. Japanese Government Quarantine Certificate
5. Hydrogen generator hydrogen purity report



## Attached 2. Factory registration certificate

**\* 산업집적활성화 및 공장설립에 관한 법률 시행규칙 [별지 제6호의2서식] <개정 2012.10.5>**

공장실험윤리인자형시스템([www.famis.go.kr](http://www.famis.go.kr))에서 신청할 수 있습니다.

## 공장등록증명(신청서)

(일괄)

접수번호	접수일	처리기간	측시

<b>신청인</b>	회사명 (주)토리	전화번호  031) 348-5656
	대표자 성명 김용하	생년월일(법인등록번호) 135811-0288291
	대표자주소(법인소재지) 경기도 군포시 공단로140번길 68, 5층 (당첨동)	

<b>등록 내용</b>	공장소재지 도로명 : 경기도 군포시 공단로140번길 68, 5층 (당첨동) 지번 : 경기도 군포시 당항동 174-3번지 5층	지목 공업용지	보유구분 자가 [ ] 임대 [x]
	공장등록일 2016-11-14	사업시작일 2016-03-11	종업원수 날:4 아:2
	공장의 업종(분류번호) 그외 기타 전기장비 제조업 (28909)		

공장부지면적 568.600 m²	제조시설면적 277.800 m²	부대시설면적 123.200 m²
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<b>등록 조건</b>	등록조건 · 증설등 기재사항 변경내용(변경 날짜 및 내용)
--------------	----------------------------------

「산업집적활성화 및 공장설립에 관한 법률 시행규칙」 제12조제3에 따라 위와 같이 공장등록증명서를 신청합니다.

2016년 11 월 14 일

신청인    (주)토리 (서명 또는 인)

군포시장    귀하

구비서류      열람	수수료
	1000 원


차인절차					
신청서작성	→ 접수	→ 등록 여부 확인	→ 결재	→ 공청장명 증명서 발급	→ 등본
신청인	처리기관	처리기관	처리기관	처리기관	처리기관

「산업집적활성화 및 공장설립에 관한 법률」 제16조〔 제1항· 〕 제2항· 〔 제3항〕에 따라 위와 같이 등록된 공장임을 증명합니다.

2016년 11 월 14 일

군포시장



2016.11.14 17:00 (재촬영됨)

2016.11.14 G9012269 (A)


본시발행함

2016년11월14일

군포시장

(수인증서가 인정(철봉)되지 아니한  
정확한 호출정보를 보충할 수 없습니다.)

김영민 2016.11.14 17:03



# Attached 3. PSE certificate

## DECLARATION OF CONFORMITY

**TORY Co., Ltd.**

D-1303 Digital Empire, 16, Deogyong-daero 1556 beon-gil,  
Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea.

DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE PRODUCT:

**PRODUCT :** Hydrogen Generator  
**TYPE-DESIGNATION :** TRJ-HG001, TRJ-HG002

TO WHICH THIS DECLARATION RELATES IS IN CONFORMITY WITH THE  
FOLLOWING STANDARD(S) OR OTHER NORMATIVE DOCUMENT(S)

**J55014-1(H20)**

*This device has been shown to be in compliance with and was tested in accordance with  
the measurement procedures specified in the standards specifications listed above and  
as indicated in the measurement report number :*

**KCTL16-YJE0027**

Authorized person

Date: Jul. 01, 2016

Name: Kim Yong Ha

Y. H Kim

Signature



## Declaration of Conformity

**TORY Co., Ltd.**

D-1303 Digital Empire, 16, Deogyong-daero 1556 beon-gil,  
Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea.

WE DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE PRODUCT:

**PRODUCT :** Hydrogen Generator  
**MODEL :** TRJ-HG001

Reference Report No.: CTS-S16-0051

THE ABOVE PRODUCT HAS SUCCESSFULLY DEMONSTRATED THAT ITS  
PRODUCT IS IN COMPLIANCE WITH

**IEC 60335-2-23: 2003 (Fifth Edition) used in conjunction with  
IEC 60335-1: 2001 (Fourth Edition) Including Japanese deviation  
J 60335-2-23 (H20), J 60335-1 (4 edition-H20)**

We, the undersigned, hereby declare that the equipment specified above  
Conforms to the above standard(s)



Authorized person

Date: Jul. 01, 2016

Name: Kim Yong Ha

Signature: Y. H Kim

# Attached 4. Japanese Government Quarantine Certificate

## 輸入食品等試験成績証明書

No.F165500069-001  
平成 28 年 8 月 5 日

株式会社 パーソナライフ 殿

平成28年7月5日 に当協会に依頼された供試品について試験した結果、下記のとおりであることを証明します。

広島市中区広瀬北町9番1号  
一般財団法人 広島県環境保健協会

品名およびブランド名	水素吸入器 部品 MEA GASKET 材質:シリコンゴム (色・形状:別紙写真のとおり)	貨物の記号 及び 番号	CCL 932609
輸入数量	70 SET 0.0005 KG	着港年月日	2016 年 7 月 2 日
船名又は航空機名	OZ0162	生産国又は製造所名	TORY CO.,LTD (16690) D-1303, DIGITAL EMPIRE, 16, DEOGYEONG-DAERO 1556BEON-GIL, SUWON-SI, GYEONGGI-DO, KOREA
輸入業者名 住所	株式会社 パーソナライフ 広島県広島市中区上八丁堀4-1 アーバンビューグランドタワー10F	通関業者名	株式会社 ヒロクラ
電話番号	082-502-1185	電話番号	(082)253-2115
見本持出許可申請書又は 見本持出包括申請書番号	34002473510		
検体採取及び 検査に関する連絡先	一般財団法人 広島県環境保健協会 環境生活センター 中川 圭太	TEL	(082)293-1514
検体採取者名	中川 圭太		
試験検査結果			
検査項目	検査結果	定量下限	基準値 備考 検査方法
カドミウム ( $\mu\text{g/g}$ )	通	***	100以下 平成24年12月28日付厚生労働省告示第395号
鉛 ( $\mu\text{g/g}$ )	通	***	100以下
フェノール ( $\mu\text{g/mg}$ )	通	***	5以下 2
ホルムアルデヒド 亜鉛 ( $\mu\text{g/mg}$ )	通	***	陰性 2
重金屬(Pbとして) ( $\mu\text{g/mg}$ )	通	***	15以下 1
蒸発残留物(水) (以下余白)	通(検出されず)	10	60以下 2
本結果は、当機関が認可を受けた業務規程に準じ、厚生労働省令で定める基準に適合する方法で実施した検査によるものです。 「検出されず」とは、定量下限を下回ることです。			
備考 1 浸出条件:60℃ 30分 浸出用液:4%酢酸 2 浸出条件:60℃ 30分 浸出用液:水			

## 輸入食品等試験成績証明書

No.F165500081-001  
平成 28 年 8 月 5 日

株式会社 パーソナライフ 殿

平成28年7月15日 に当協会に依頼された供試品について試験した結果、下記のとおりであることを証明します。

広島市中区広瀬北町9番1号  
一般財団法人 広島県環境保健協会

品名およびブランド名	水素吸入器 部品 HY CELL CAP GASKET 材質:シリコンゴム (色・形状:別紙写真のとおり)	貨物の記号 及び 番号	CCL 932643
輸入数量	15 SET 0.0012 KG	着港年月日	2016 年 7 月 14 日
船名又は航空機名	OZ0162	生産国又は製造所名	TORY CO.,LTD (16690) D-1303, DIGITAL EMPIRE, 16, DEOGYEONG-DAERO 1556BEON-GIL, SUWON-SI, GYEONGGI-DO, KOREA
輸入業者名 住所	株式会社 パーソナライフ 広島県広島市中区上八丁堀4-1 アーバンビューグランドタワー10F	通関業者名	株式会社 ヒロクラ
電話番号	082-502-1185	電話番号	(082)253-2115
見本持出許可申請書又は 見本持出包括申請書番号	34002475460		
検体採取及び 検査に関する連絡先	一般財団法人 広島県環境保健協会 環境生活センター 吉原 正雄	TEL	(082)293-1514
検体採取者名	吉原 正雄		
試験検査結果			
検査項目	検査結果	定量下限	基準値 備考 検査方法
カドミウム ( $\mu\text{g/g}$ )	通	***	100以下 平成24年12月28日付厚生労働省告示第395号
鉛 ( $\mu\text{g/g}$ )	通	***	100以下
フェノール ( $\mu\text{g/mg}$ )	通	***	5以下 2
ホルムアルデヒド 亜鉛 ( $\mu\text{g/mg}$ )	通	***	陰性 2
重金屬(Pbとして) ( $\mu\text{g/mg}$ )	通	***	15以下 1
蒸発残留物(水) (以下余白)	通(検出されず)	10	60以下 2
本結果は、当機関が認可を受けた業務規程に準じ、厚生労働省令で定める基準に適合する方法で実施した検査によるものです。 「検出されず」とは、定量下限を下回ることです。			
備考 1 浸出条件:60℃ 30分 浸出用液:4%酢酸 2 浸出条件:60℃ 30分 浸出用液:水			



# Attached 5. Hydrogen generator hydrogen purity report( 99.99%)

원본확인번호 : 9690-9192-8573-3558



Korea Research  
Institute of  
Standards and Science

대전광역시 유성구 가청로 267 (우) 34113 Phone 042-868-5403, Fax 042-868-5555

시험번호\_Report No : 1601-00800-001

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## 시험 성적서 TEST REPORT

의뢰기관\_Applicant : 전주대학교 산학협력단

주소\_Address : 전북 전주시 완산구 천령로 303, 1층(효자동2가)

시험대상\_Test Item : H<sub>2</sub>, O<sub>2</sub>+Ar, N<sub>2</sub>, CH<sub>4</sub>, CO, CO<sub>2</sub>, THC(C<sub>1</sub>~C<sub>4</sub>), H<sub>2</sub>O, 수소순도

제작회사 및 형식\_Manufacturer & Model : NONE

기기번호\_Serial No : NONE

접수일자\_Date of Receipt : 2016, 07, 28

시험일자\_Date of Test : 2016, 08, 23

### 시험내용\_Description of Test

시험명\_Test Name : 순도분석

시험장소\_Test Site : ☒ KRIS표준실\_KRIS Lab ☐ 이동시험\_Mobile Lab ☐ 현장\_On-site

시험환경\_Environmental Conditions

- 온도\_Temperature : 20 ~ 22 °C

- 상대습도\_Relative Humidity : 40 ~ 60 %

시험방법\_Test Method :

미량무기가스분석 시험절차(T-02-016-2000)

시험결과\_Test Results :

다음 쪽 "시험결과" 참조

측정불확도\_Measurement Uncertainty :

다음 쪽 "시험결과" 참조

담당자\_Tested by : 이진복

042-868-5357

ecjblee@kriss.re.kr

책임자\_Approved by : 이정순

042-868-5766

leejs@kriss.re.kr



2016년 9월 20일

국가측정표준대표기관 National Metrology Institute of Korea

한국표준과학연구원

이 성적서는 한국표준과학연구원 승인없이 수정 또는 부분 복제하여 사용할 수 없음. 위 내용은 의뢰자가 제공한 시험용에 한하여 유효하며, 광고에 사용할 수 없음. 시료명은 의뢰자가 제공한 것임. (This report shall not be reproduced except in full, without the written approval of KRIS. The results described above are valid only for attached sample, and cannot be used for advertisement of any product. The name of the sample has been submitted by the applicant.)

원본확인번호 : 9690-9192-8573-3558



대전광역시 유성구 가청로 209 (우) 34113 Phone 042-868-5403, Fax 042-868-5555

시험번호\_Report No : 1601-00800-001

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## 시험 결과 TEST RESULTS

- 전주대학교 산학협력단에서 의뢰한 수소발생장치(물 전기분해 장치)에서 발생한 수소 순도 및 불순물 분석 시험결과는 다음과 같다.

성분	농도
O <sub>2</sub> +Ar	81.2 $\mu$ mol/mol(상대확장불확도( $k=2$ ): 3 %)
N <sub>2</sub>	17.6 $\mu$ mol/mol(상대확장불확도( $k=2$ ): 10 %)
CO	0.5 $\mu$ mol/mol이하
CH <sub>4</sub>	0.1 $\mu$ mol/mol이하
THC(C <sub>1</sub> ~C <sub>4</sub> )	N.D(Detection limit : 0.5 $\mu$ mol/mol)
CO <sub>2</sub>	3.9 $\mu$ mol/mol(상대확장불확도( $k=2$ ): 10 %)
H <sub>2</sub> O	0.285 % (mole fraction), 상대확장불확도( $k=2$ ): 2 %
H <sub>2</sub> 순도	99.705 % (mole fraction), 상대확장불확도( $k=2$ ): 0.001 %

• 분석장비 : GC-PDD(TCD/FID)-methanator, Balance(중량법)

- 수소발생장치를 KRIS에 설치하였고 발생하는 수소가스 라인에 수분제거 트랩을 설치한 후 30분 이상 장치를 가동 후 고압실린더에 가스를 포집하였다.
- 수분분석은 수분트랩(Mg(ClO<sub>4</sub>)<sub>2</sub>)을 이용하여 총 유량 100 L를 통과시켜 증량법에 의한 무게를 측정하였다. (유속은 3.2 LPM)
- 본 시험검사에 표시된 화학량은 분석기간 동안에 취한 시료에 대한 측정량이며, 다른 시기에 대한 화학량에 대하여는 책임지지 않는다.
- 본 성적서를 복사한 것은 성적서로서 효력이 없다.

끝(End of the Results).

※ 본 성적서 및 원본(https://ashg.kriss.re.kr)에서 본 성적서 상단의 원본확인번호 또는 2D바코드 스캔을 통해 여부 확인 가능  
※ 성적서 출력 및 원본 출력의 복사당지원은 복사시에 목적으로 처리됩니다.

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