

TAIWAN CLEAN BIOCHEMICAL TECHNOLOGY CO., LTD.

NO.17, ZHUYE LN., RENWU DIST., KAOHSIUNG CITY

814, TAIWAN (R.O.C.)

TEL: 07-3741238 FAX: 07-3742939



Test Report

Date Issued: 2012-04-20

Report No .: 10154C00631-1-2-02

Version: A

Service Item: ClO2 Content

Client

Company Name: Taiwan-Clean Biochemical Technology Co.,Ltd. Address: No.17, Zhuye Ln., Renwu Dist., Kaohsiung City 814, Taiwan

Result of Service Item, performed by ITRI Laboratory, is specified on the next/ following page(s).

This report, including a signature page and content, is a total of 2 pages. The validity of this report no longer exists if signature page and content are separated.





Tith

Vice President and General Director Material and Chemical Research Laboratories Department Manager



Report No.: 10154C00631-1-2-02

Test Item: ClO2 Content

Name of Article: Taiwan-Clean Electrolyzed gaseous chlorine dioxide solution

Test Results and Descriptions

I. Test results

Service Items	Result
ClO ₂ Content	$(2274 \pm 20) \text{ ppm (m/m)}$

- Testing Date and Location of Test
 performed at Industrial Technology Research Institute Material and Chemical
 Research Laboratories Chemical Analysis Dept. during the period from March 26,
 2012 to April 18, 2012.
- 2. Test method Refer JIS K8920
- 3. Test Standard/Test Instrument
 Titrator(Metrohm 665 Dosimate) \cdot Balance(Sartorius A210P)
- Environmental Conditions
 The test items in this report are not affected by the environmental condition.
 Therefore, no specification on the environment is needed.
- 5. Evidence of Standards Traceability

Merck: KIO₃-99.79%

Sartorius A210P Report No. A00-09-103-01 A00-09-203-09

CENPRO TECHNOLOGY CO., LTD.

CT8F-1; No. 286-8; Hsinya; Rd; Chyan Jenn Dist., Kaohsiung, Taiwan, R.O.C. CTCCTel. (07)8152248; CFax: (07) 8152250;

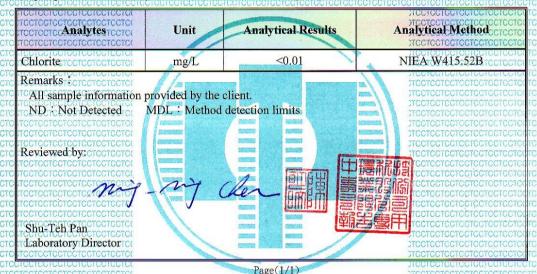
Sample Analysis Report

Client Taiwan-Clean Biochemical Technology Co., Ltd. CTCCT Date Collected Coct 02, 2012

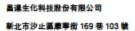
Sample ID CTaiwan-Clean Gaseous Chlorine Dioxide Solution Date Received Cot 03, 2012 09:50AM

Collected by : Taiwan-Clean Biochemical Technology Co., Ltd. Report No. TO NWD1010387

Sampling site : No.17, Zhuye Ln., Renwu Dist., Kaohsiung City 814, Taiwan(R.O.C)



CT9916930





Tel:+886 2 2696-7767 Fax:+886 2 6615-9989

ACUTE ORAL TOXICITY STUDY IN RATS (STUDY NO.: T61712001-GN)

Taiwan Clean Gaseous Chlorine Dioxide Solution

1. SPONSOR

Name Taiwan Clean Biochemical Technology Co., Ltd.

Address No.17, Zhuye Ln., Renwu Dist., Kaohsiung City 814, Taiwan (R.O.C.)

Phone: +886-7-3741-1238 Fax: +886-7-3742-2939

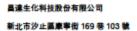
Email: a8684.a5556@msa.hinet.net

2. TESTING FACILITY

Name: Center of Toxicology and Preclinical Sciences (CTPS), QPS Taiwan Address: No. 103, Lane 169, Kangning St., Xizhi Dist., New Taipei City 22180, Taiwan

3. RESULTS

No mortality or any other clinical signs were observed for rats receiving a single dose of 2000 mg/kg "Taiwan Clean Gaseous Chlorine Dioxide Solution" in the study. The body weight changes of all test animals were normal throughout the study, and there was no onset of gross lesions at the end of the study.





Tel:+886 2 2696-7767 Fax:+886 2 6615-9989

EYE IRRITATION TEST IN RABBITS (STUDY NO.: T61712002-IR)

Taiwan Clean Gaseous Chlorine Dioxide Solution

1. SPONSOR

Name Taiwan Clean Biochemical Technology Co., Ltd. Address No.17, Zhuye Ln., Renwu Dist., Kaohsiung City 814, Taiwan (R.O.C.)

Phone: +886-7-3741-1238 Fax: +886-7-3742-2939

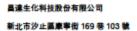
Email: a8684.a5556@msa.hinet.net

2. TESTING FACILITY

Name: Center of Toxicology and Preclinical Sciences (CTPS), QPS Taiwan Address: No. 103, Lane 169, Kangning St., Xizhi Dist., New Taipei City 22180, Taiwan

3. RESULTS

After given as a single dose (0.1 mL) of 20% (v/v) "Taiwan Clean Gaseous Chlorine Dioxide Solution" to the rabbits, no clinical signs were observed. The weight changes were normal for all study animals before and after dosing. There were no observable irritation responses of the eye within 72 hours post-dosing. Based on these results, the 20% (v/v) "Taiwan Clean Gaseous Chlorine Dioxide Solution" was determined as non-irritant.





Tel:+886 2 2696-7767

DERMAL SENSITIZATION TEST – GUINEA PIG MAXIMIZATION TEST (GPMT) (STUDY NO.: T61712003-IR)

Taiwan Clean Gaseous Chlorine Dioxide Solution

1. SPONSOR

Name Taiwan Clean Biochemical Technology Co., Ltd. Address No.17, Zhuye Ln., Renwu Dist., Kaohsiung City 814, Taiwan (R.O.C.)

Phone: +886-7-3741-1238 Fax: +886-7-3742-2939

Email: a8684.a5556@msa.hinet.net

2. TESTING FACILITY

Name: Center of Toxicology and Preclinical Sciences (CTPS), QPS Taiwan Address: No. 103, Lane 169, Kangning St., Xizhi Dist., New Taipei City 22180, Taiwan

3. RESULTS

All study animals were alive under the dermal sensitization test of the test article, "Taiwan Clean Gaseous Chlorine Dioxide Solution", by the guinea-pig maximization test method (GPMT) without any symptoms of systemic toxicity. Weight changes throughout the study period were normal for all animals tested. After induction and challenge exposures to the test article, the highest skin reaction score by Magnusson sensitization scoring standard was "1" for the test group animals, identical to the skin reaction of control group animals (control article: water), indicating an absence of allergic responses to the test article. The test article sensitization rate is 0%. Based on these results, we have classified the test article, "Taiwan Clean Gaseous Chlorine Dioxide Solution" (undiluted) as a "Non-sensitizer", with sensitizing activities comparable to water.



食品實驗室-台北 FOOD LAB-TAIPEI 檢驗報告 Test Report

Taiwan-Clean Biochemical Technology Co., Ltd. No. 17, Zhuye Ln., Renwu Dist., Kaohsiung City 814, Taiwan (R.O.C.)

Report No.: FA/2012/30007A-03 Of Page : 1

March 14, 2012 Date

The following merchandise was submitted & identified by the client as:

Product Name:

Taiwan-Clean Gaseous Chlorine Dioxide Solution

Application:

Taiwan-Clean Biochemical Technology Co., Ltd.

Date of Sample Received:

March 01, 2012 March 07, 2012

Date of Testing: Date of Reissuing Report:

December 22, 2012

Test Requested & Method:

Reference U.S.PHARMACOPEIA MICROBIAL ANTIMICROBIAL PRESERVATIVES EFFECTIVENESS TEST(51)

Test Results:

Dilution sample 100 times was mixed with bacteria medium in the ratio of 1:1.

Test Item		Osec(Initial Inoculation)	5min	Reduction(%) >99.999	
Salmonella ATCC13311 (CFU/ml)		1.8x10 ⁵	Not Detected		
Staphylococcus aureus ATCC6538	(CFU/ml)	2.2x10 ⁵	Not Detected	>99.999	
Klebsiella pneumoniae ATCC4352	(CFU/ml)	1.9x10 ⁵	Not Detected	>99.999	

Dilution sample 20 times was mixed with bacteria medium in the ratio of 1:1.

Test Item		Osec(Initial Inoculation)	5min	Reduction(%)	
Candida albicans ATCC10231	(CFU/ml)	6.0x10 ⁵	Not Detected	>99.999	



台灣檢驗科技股份有限公司 1 (886-2) 2299-3939

SGS Taiwan Ltd. 3F 125, Wu Kung Road, Wu Ku District, New Taipei City, Taiwan /新北市五股區五工路125號3樓

www.sqs.tw Member of SGS Group



FOOD LAB-TAIPEI 檢驗報告 Test Report

Taiwan-Clean Biochemical Technology Co., Ltd. No. 17, Zhuye Ln., Renwu Dist., Kaohsiung City 814, Taiwan (R.O.C.)

Report No.: FA/2012/30007A-03 : 2 Of Page

: March 14, 2012 Date

Test Results:

Dilution sample 50 times was mixed with bacteria medium in the ratio of 1:1

Test Item		Osec(Initial Inoculation)	5min	Reduction(%)	
Pseudomonas aeruginosa s ATCC9027	(CFU/ml)	3.2x10 ⁵	Not Detected	>99.999	

Dilution sample 5 times was mixed with bacteria medium in the ratio of 1:1.

Test Item		Osec(Initial Inoculation)	30sec	Reduction(%)
Escherichia Coli ATCC8739	(CFU/ml)	1.4x10 ⁵	Not Detected	>99.999

Dilution sample 100 times was mixed with bacteria medium in the ratio of 1:1.

Test Item		Osec(Initial Inoculation)	5min	Reduction(%)	
Escherichia Coli ATCC8739	(CFU/ml)	1,4x10 ⁵	Not Detected	>99.999	

Chengchia Trai M.R./Ma Signed for and on behalf of SGS Taiwan Ltd.

1004



食品實驗室-台北 FOOD LAB-TAIPEI 檢驗報告 Test Report

Taiwan-Clean Biochemical Technology Co., Ltd. No. 17, Zhuye Ln., Renwu Dist., Kaohsiung City 814, Taiwan (R.O.C.)

Report No.: FA/2012/30007A-05

Date:

2012/03/14

Page:

1 of 1

THE FOLLOWING MERCHANDISE WAS(WERE) SUBMITTED AND IDENTIFIED BY THE CLIENT AS:

Product Name:

Taiwan-Clean Gaseous Chlorine Dioxide Solution

Application:

Taiwan-Clean Biochemical Technology Co., Ltd.

Sample Received:

2012/03/01

Testing Date:

2012/03/02

Test Conditions:

Sample was not dilute

Test Results:

Test Item	Test Method	Results	MDL	Unit
Heavy Metal as Pb	DOH FOOD NO.0949412804 Announced	<1	<1	ppm(mg/kg)
Arsenic (As)	With reference to USEPA 3051 method. Analysis was	N.D.	0.010	ppm(mg/kg)
Lead (Pb)	performed by ICP-MS.	N.D.	0.010	ppm(mg/kg)
Cadmium (Cd)	*	N.D.	0.010	ppm(mg/kg)
Mercury (Hg)		N.D.	0.010	ppm(mg/kg)

Note: 1. The report is in vain if it is partly reproduced or used.

- 2. "ND"(Not detected) means the test data mentioned on the report is lower than the detection limit value.
- 3."Negative": means the test results is lower than detection limit value.
- 4.Reissuing Report Date: 2012/12/22.

- END -

Chengchia 7sai, M.R. M. Signed for any on behalf SGS Taiwan Ltd.



食品實驗室-台北 FOOD LAB-TAIPEI 檢驗報告 Test Report

Taiwan-Clean Biochemical Technology Co., Ltd. No. 17, Zhuye Ln., Renwu Dist., Kaohsiung City 814, Taiwan

Date:

Report No.: FA/2012/30007A-04

2012/03/14

(R.O.C.)

Page : 1 of 1

THE FOLLOWING MERCHANDISE WAS(WERE) SUBMITTED AND IDENTIFIED BY THE CLIENT AS:

Product Name:

Taiwan-Clean Gaseous Chlorine Dioxide Solution

Application:

Taiwan-Clean Biochemical Technology Co., Ltd.

Sample Received :

2012/03/01

Testing Date:

2012/03/02

Test Conditions:

Sample was not dilute

Test Results:

Test Item	Test Method	Results	MDL	Unit	
Phthalate					
BBP (Benzyl butyl phthalate)	Analysis was performed by GC/MS.	N.D.	5.0	ppm(mg/kg	
DBP (Di-butyl phthalate)		N.D.	5.0	ppm(mg/kg	
DEHP (Di-(2-ethylhexyl)		N.D.	5.0	ppm(mg/kg	
phthalate)	· .				
DNOP (Di-n-octyl phthalate)	8	N.D.	5.0	ppm(mg/kg	
DNPP (Di-n-nonyl phthalate)		N.D.	5.0	ppm(mg/kg	
DMEP (Bis(2-methoxyethyl)	8	N.D.	5.0	ppm(mg/kg	
phthalate (Dimethoxyethyl					
phthalate))				18	
DIPP (Diisopentylphthalate)		N.D.	5.0	ppm(mg/kg	

Note: 1. The report is in vain if it is partly reproduced or used.

2. "ND"(Not detected) means the test data mentioned on the report is lower than the detection limit value.

3."Negative": means the test results is lower than detection limit value.

4.Reissuing Report Date: 2012/12/22.

- END -

Chengchia 7sa , M.R./Manager Signed for any on behalf of SGS Taiwan Ltd.