



## TEST REPORT

## CLIENT DETAILS

Contact -  
 Client CSI Solar Co., Ltd.  
 Address 199 Lushan Road, SND, Suzhou, Jiangsu  
 CHINA  
 Telephone -  
 Facsimile -  
 Email -  
 Order Number -  
 Samples Solid waste(1)  
 Project -

## LABORATORY DETAILS

Manager SGS-CSTC  
 Laboratory Environment Laboratory  
 Address 2/F, 3RD BUILDING NO. 889,  
 YISHAN ROAD, XUHUI DISTRICT,  
 SHANGHAI, CHINA  
 Telephone +86 (21) 6140 2666-2002  
 Facsimile +86 (21) 6115 2164  
 Email REPORT.ENV@SGS.COM  
 Report Number SHE23-01445 R3  
 SGS Reference 0000269060  
 Date Reported 2023/05/17  
 Analysis Date 2023/03/27 - 2023/04/07

## COMMENTS

- 1.The results apply to the sample(s) as received.
- 2.The report is translated from SHE23-01445 R2.
- 3.This Report certificate cancels and supersedes the Report SHE23-01445 R1 dated 2023/04/07 issued by SGS, original report will be invalid from today.
- 4.Amendment:Add comments.

## SIGNATORIES

Edith LI  
Reported by

Jun Meng  
Reviewed by

Vivian LI  
Approved by



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.  
 Testing Center-Environment Laboratory

3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233  
 中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t (86-21) 61072828 f (86-21) 61152164  
 t (86-21) 61072828 f (86-21) 61152164

[www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
[sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## 声明 Statement

1. 检测报告无本实验室检验检测专用章无效。

The test report is invalid without the official seal of the laboratory.

2. 未经本公司书面许可，不得复制 (全文复制除外) 检测报告。

This test report cannot be reproduced in any way, except in full content, without prior approval in writing by the laboratory.

3. 检测报告无编制、审核、批准人签字无效。

The test report is invalid without the signature of the compiler, the checker and the approver

4. 检测报告涂改无效。

The test report is invalid if altered.

5. 本检测报告以中文为准，英文文本 (如有) 仅为译文，两者发生冲突时，应以中文文本为准。

The test report has been drafted in Chinese and translated into English (if applicable) for convenience only. In the event of discrepancy, the Chinese version shall prevail.

6. 送检样品的样品类型、样品名称、样品描述、项目名称等信息由客户提供。

The sample type, sample name, sample description, project name and other information of the submitted samples are provided by the client.

7. 如未加盖CMA章则仅供内部参考，不具有对社会的证明作用。

The report is for internal reference only if it is not stamped with CMA mark, it has no proof function to the society.

8. 如对本检测报告有异议，请在收到报告10天之内与本公司联系。

Should you have any queries or objection to the test report, please contact us within 10 days after receiving the report.

### 符号表/Legend

"-" 未测试该参数或不适用/The parameter is not tested or not applicable

↑ 提高检出限/Detection limit raised

↓ 降低检出限/Detection limit lowered

ND 未检出/Not Detected



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.  
Testing Center-Environmental Laboratory

3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233  
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t (86-21) 61072828 f (86-21) 61152164  
t (86-21) 61072828 f (86-21) 61152164

[www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

			Sample Number		23-01445.001
			Sample Name		PV Module:CS7x-TB-AG
			Test Object		Solid waste
			Sample Description		CP23-014221
			Receive Date		2023/03/27
Parameter	Method	Units	MDL	Limit	Testing Results
Arsenic (As)	USEPA 200.8	mg/L	0.050	≤5	ND
Barium (Ba)	USEPA 200.8	mg/L	0.010	≤100	ND
Cadmium (Cd)	USEPA 200.8	mg/L	0.001	≤1	<b>0.008</b>
Chromium (Cr)	USEPA 200.8	mg/L	0.010	≤5	ND
Lead (Pb)	USEPA 200.8	mg/L	0.010	≤5	<b>1.47</b>
Selenium (Se)	USEPA 200.8	mg/L	0.050	≤1	ND
Silver (Ag)	USEPA 200.8	mg/L	0.010	≤5	ND
Mercury (Hg)	USEPA 7473	mg/L	0.005	≤0.2	ND
Benzene	USEPA 8260D	mg/L	0.0005	≤0.5	ND
Carbon tetrachloride	USEPA 8260D	mg/L	0.0005	≤0.5	ND
Chlorobenzene	USEPA 8260D	mg/L	0.0005	≤100	ND
Chloroform	USEPA 8260D	mg/L	0.0005	≤6	ND
1,4-Dichlorobenzene	USEPA 8260D	mg/L	0.0005	≤7.5	ND
1,2-Dichloroethane	USEPA 8260D	mg/L	0.0005	≤0.5	ND
1,1-Dichloroethene	USEPA 8260D	mg/L	0.0005	≤0.7	ND
2-butanone(MEK)	USEPA 8260D	mg/L	0.020	≤200	ND
Tetrachloroethene	USEPA 8260D	mg/L	0.0005	≤0.7	ND
Trichloroethene	USEPA 8260D	mg/L	0.0005	≤0.5	ND
Vinyl chloride	USEPA 8260D	mg/L	0.0005	≤0.2	ND
Methylphenol <sup>1</sup>	USEPA 8270E	mg/L	0.001	≤200	ND
2-Methylphenol	USEPA 8270E	mg/L	0.0005	-	ND
3&4-Methylphenol	USEPA 8270E	mg/L	0.0005	-	ND
2,4-Dinitrotoluene	USEPA 8270E	mg/L	0.0005	≤0.13	ND
Hexachlorobenzene	USEPA 8270E	mg/L	0.0005	≤0.13	ND
Hexachlorobutadiene	USEPA 8270E	mg/L	0.0005	≤0.5	ND
Hexachloroethane	USEPA 8270E	mg/L	0.0005	≤3	ND
Nitrobenzene	USEPA 8270E	mg/L	0.0005	≤2	ND
Pentachlorophenol	USEPA 8270E	mg/L	0.0025	≤100	ND
Pyridine	USEPA 8270E	mg/L	0.002	≤5.0	ND
2,4,5-Trichlorophenol	USEPA 8270E	mg/L	0.0005	≤400	ND
2,4,6-Trichlorophenol	USEPA 8270E	mg/L	0.0005	≤2	ND
Chlordane(Total) <sup>2</sup>	USEPA 8270E	mg/L	0.001	≤0.03	ND
Endrin	USEPA 8270E	mg/L	0.0005	≤0.02	ND
γ-BHC	USEPA 8270E	mg/L	0.0005	≤0.4	ND
Toxaphene	USEPA 8270E	mg/L	0.050	≤0.5	ND
γ-Chlordane	USEPA 8270E	mg/L	0.0005	-	ND
α-Chlordane	USEPA 8270E	mg/L	0.0005	-	ND
Methoxychlor	USEPA 8270E	mg/L	0.0005	≤10	ND
Heptachlor	USEPA 8270E	mg/L	0.0005	≤0.008	ND
2,4-D*	USEPA 8151A	mg/L	0.0005	≤10	ND
2,4,5-TP (Silvex, Fenopop)	USEPA 8151A	mg/L	0.0005	≤1	ND

## Remark:

- 1.Methylphenol are the sum of 2-Methylphenol and 3&4-Methylphenol
- 2.Chlordane(Total) are the sum of α-Chlordane and γ-Chlordane
- 3.Preparative method:USEPA1311-1992(Toxicity Characteristic Leaching Procedure)
- 4.The Limits comes from CFR(code of federal regulations) title 40 part 261.24
- 5.CS7x: x=N or L, according to manufacturing's product name



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233

中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t (86-21) 61072828 f (86-21) 61152164

t (86-21) 61072828 f (86-21) 61152164

[www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)

[sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## Method List

USEPA 200.8-1994 Determination of trace elements in waters and wastes by inductively coupled plasma-mass spectrometry  
 USEPA 7473-2007 Metals-Hg  
 USEPA 8260D-2018 VOCs  
 USEPA 8270E-2018 SVOCs  
 USEPA 8151A-1996 Acid Herbicides in Water by GC-MS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
**Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)**  
 3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233 t (86-21) 61072828 f (86-21) 61152164 www.sgsgroup.com.cn  
 中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t (86-21) 61072828 f (86-21) 61152164 e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

**Method:USEPA 200.8-1994**

Equipment Name	Model	Equipment Number	Serial Number
ICP-MS	Agilent 7900	CHEM-998	JP16311502

**Method:USEPA 7473-2007**

Equipment Name	Model	Equipment Number	Serial Number
Hg analyzer	Milestone DMA-80	CHEM-958	16041979

**Method:USEPA 8260D-2018**

Equipment Name	Model	Equipment Number	Serial Number
PT-GC-MS	Agilent TWR-AQUA100/7890B/5977B	chem-979	US16083002/CN16243106/US1623M026

**Method:USEPA 8270E-2018**

Equipment Name	Model	Equipment Number	Serial Number
GC-MS	Agilent 7890B/5977A	CHEM-1118	CN18053182/US1805M023

**Method:USEPA 8270E-2018**

Equipment Name	Model	Equipment Number	Serial Number
GC-MS	Agilent 7890B/5977A	CHEM-1118	CN18053182/US1805M023

**Method:USEPA 8151A-1996**

Equipment Name	Model	Equipment Number	Serial Number
GC-MS	Agilent6890N/5973i	CHEM-126	US144004/CN10539052/US52411034



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

**Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)**

3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233 t (86-21) 61072828 f (86-21) 61152164 www.sgsgroup.com.cn  
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t (86-21) 61072828 f (86-21) 61152164 e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)



## Method Blank(MB)

Parameter	Batch ID	Unit	MDL	MB	Control Range
-----------	----------	------	-----	----	---------------

## Determination of trace elements in waters and wastes by inductively coupled plasma-mass spectrometry Method: USEPA 200.8-1994

Arsenic (As)	LB2311671	mg/L	0.050	<0.050	<0.050
Barium (Ba)	LB2311671	mg/L	0.010	<0.01	<0.010
Cadmium (Cd)	LB2311671	mg/L	0.001	<0.001	<0.001
Chromium (Cr)	LB2311671	mg/L	0.010	<0.01	<0.010
Lead (Pb)	LB2311671	mg/L	0.010	<0.010	<0.010
Selenium (Se)	LB2311671	mg/L	0.050	<0.050	<0.050
Silver (Ag)	LB2311671	mg/L	0.010	<0.010	<0.010

## Metals-Hg Method: USEPA 7473-2007

Mercury (Hg)	LB2311451	mg/L	0.005	<0.005	<0.005
--------------	-----------	------	-------	--------	--------

## Acid Herbicides in Water by GC-MS Method: USEPA 8151A-1996

2,4-D	LB2311761	mg/L	0.0005	<0.0005	<0.0005
2,4,5-TP (Silvex, Fenopop)	LB2311761	mg/L	0.0005	<0.0005	<0.0005

## VOCs Method: USEPA 8260D-2018

Benzene	LB2311764	mg/L	0.0005	<0.0005	<0.0005
Carbon tetrachloride	LB2311764	mg/L	0.0005	<0.0005	<0.0005
Chlorobenzene	LB2311764	mg/L	0.0005	<0.0005	<0.0005
Chloroform	LB2311764	mg/L	0.0005	<0.0005	<0.0005
1,4-Dichlorobenzene	LB2311764	mg/L	0.0005	<0.0005	<0.0005
1,2-Dichloroethane	LB2311764	mg/L	0.0005	<0.0005	<0.0005
1,1-Dichloroethene	LB2311764	mg/L	0.0005	<0.0005	<0.0005
2-butanone(MEK)	LB2311764	mg/L	0.020	<0.020	<0.020
Tetrachloroethene	LB2311764	mg/L	0.0005	<0.0005	<0.0005
Trichloroethene	LB2311764	mg/L	0.0005	<0.0005	<0.0005
Vinyl chloride	LB2311764	mg/L	0.0005	<0.0005	<0.0005

## SVOCs Method: USEPA 8270E-2018

2-Methylphenol	LB2311607	mg/L	0.0005	<0.0005	<0.0005
3&4-Methylphenol	LB2311607	mg/L	0.0005	<0.0005	<0.0005
2,4-Dinitrotoluene	LB2311607	mg/L	0.0005	<0.0005	<0.0005
Hexachlorobenzene	LB2311607	mg/L	0.0005	<0.0005	<0.0005
Hexachlorobutadiene	LB2311607	mg/L	0.0005	<0.0005	<0.0005
Hexachloroethane	LB2311607	mg/L	0.0005	<0.0005	<0.0005
Nitrobenzene	LB2311607	mg/L	0.0005	<0.0005	<0.0005
Pentachlorophenol	LB2311607	mg/L	0.0025	<0.0025	<0.0025



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.  
Testing Center-Environmental Laboratory

3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233  
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t (86-21) 61072828 f (86-21) 61152164 www.sgsgroup.com.cn  
t (86-21) 61072828 f (86-21) 61152164 e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## Method Blank(MB)

Parameter	Batch ID	Unit	MDL	MB	Control Range
<b>SVOCs Method: USEPA 8270E-2018 (continued)</b>					
Pyridine	LB2311607	mg/L	0.002	<0.002	<0.002
2,4,5-Trichlorophenol	LB2311607	mg/L	0.0005	<0.0005	<0.0005
2,4,6-Trichlorophenol	LB2311607	mg/L	0.0005	<0.0005	<0.0005

**SVOCs Method: USEPA 8270E-2018**

Endrin	LB2311615	mg/L	0.0005	<0.0005	<0.0005
γ-BHC	LB2311615	mg/L	0.0005	<0.0005	<0.0005
Toxaphene	LB2311615	mg/L	0.050	<0.050	<0.050
γ-Chlordane	LB2311615	mg/L	0.0005	<0.0005	<0.0005
α-Chlordane	LB2311615	mg/L	0.0005	<0.0005	<0.0005
Methoxychlor	LB2311615	mg/L	0.0005	<0.0005	<0.0005
Heptachlor	LB2311615	mg/L	0.0005	<0.0005	<0.0005

The evaluation of Method Blanks (MB): All results of MB on this batch are lower than method detection limits, which meet the acceptance criteria of lab quality control.

## Laboratory Control Sample(LCS)

LCS Recovery%= Result\*100/ Reference Value.

Parameter	Batch ID	Unit	MDL	Result	Ref. Value	Recovery%	Control Range	
							Lower	Upper

**Determination of trace elements in waters and wastes by inductively coupled plasma-mass spectrometry Method: USEPA 200.8-1994**

Arsenic (As)	LB2311671	mg/L	0.050	0.199	0.2	99.5	80%	120%
Barium (Ba)	LB2311671	mg/L	0.010	0.202	0.2	101	80%	120%
Cadmium (Cd)	LB2311671	mg/L	0.001	0.192	0.2	95.8	80%	120%
Chromium (Cr)	LB2311671	mg/L	0.010	0.189	0.2	94.6	80%	120%
Lead (Pb)	LB2311671	mg/L	0.010	0.221	0.2	111	80%	120%
Selenium (Se)	LB2311671	mg/L	0.050	0.172	0.2	86.2	80%	120%
Silver (Ag)	LB2311671	mg/L	0.010	0.200	0.2	99.8	80%	120%

**Metals-Hg Method: USEPA 7473-2007**

Mercury (Hg)	LB2311451	mg/L	0.005	<0.005	0.001	96.9	80%	120%
--------------	-----------	------	-------	--------	-------	------	-----	------

**Acid Herbicides in Water by GC-MS Method: USEPA 8151A-1996**

2,4-D	LB2311761	mg/L	0.0005	0.0010	0.001	96.0	70%	130%
2,4,5-TP (Silvex, Fenopop)	LB2311761	mg/L	0.0005	0.0008	0.001	76.0	70%	130%

**VOCs Method: USEPA 8260D-2018**

Benzene	LB2311764	mg/L	0.0005	0.0202	0.02	101	70%	130%
---------	-----------	------	--------	--------	------	-----	-----	------



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CTC (Shanghai) Technical Services Co., Ltd.  
检验检测专用章  
Inspection & Testing Services  
Testing Center-Environmental Laboratory

3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233  
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t (86-21) 61072828 f (86-21) 61152164 www.sgsgroup.com.cn  
t (86-21) 61072828 f (86-21) 61152164 e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## Laboratory Control Sample(LCS)

LCS Recovery%= Result\*100/ Reference Value.

Parameter	Batch ID	Unit	MDL	Result	Ref. Value	Recovery%	Control Range	
							Lower	Upper

## VOCs Method: USEPA 8260D-2018 (continued)

Carbon tetrachloride	LB2311764	mg/L	0.0005	0.0164	0.02	82.0	70%	130%
Chlorobenzene	LB2311764	mg/L	0.0005	0.0187	0.02	93.4	70%	130%
Chloroform	LB2311764	mg/L	0.0005	0.0199	0.02	99.6	70%	130%
1,4-Dichlorobenzene	LB2311764	mg/L	0.0005	0.0197	0.02	98.7	70%	130%
1,2-Dichloroethane	LB2311764	mg/L	0.0005	0.0201	0.02	100	70%	130%
1,1-Dichloroethene	LB2311764	mg/L	0.0005	0.0233	0.02	117	70%	130%
2-butanone(MEK)	LB2311764	mg/L	0.020	<0.02	0.02	89.6	70%	130%
Tetrachloroethene	LB2311764	mg/L	0.0005	0.0173	0.02	86.7	70%	130%
Trichloroethene	LB2311764	mg/L	0.0005	0.0161	0.02	80.5	70%	130%
Vinyl chloride	LB2311764	mg/L	0.0005	0.0216	0.02	108	70%	130%

## SVOCs Method: USEPA 8270E-2018

2-Methylphenol	LB2311607	mg/L	0.0005	0.0042	0.005	83.0	30%	144%
3&4-Methylphenol	LB2311607	mg/L	0.0005	0.0079	0.01	79.1	30%	141%
2,4-Dinitrotoluene	LB2311607	mg/L	0.0005	0.0040	0.005	81.0	46%	140%
Hexachlorobenzene	LB2311607	mg/L	0.0005	0.0032	0.005	64.6	61%	127%
Hexachlorobutadiene	LB2311607	mg/L	0.0005	0.0017	0.005	34.8	10%	111%
Hexachloroethane	LB2311607	mg/L	0.0005	0.0036	0.005	73.0	38%	131%
Nitrobenzene	LB2311607	mg/L	0.0005	0.0039	0.005	78.6	25%	133%
Pentachlorophenol	LB2311607	mg/L	0.0025	0.0228	0.025	91.3	35%	130%
Pyridine	LB2311607	mg/L	0.002	0.002	0.005	48.8	10%	200%
2,4,5-Trichlorophenol	LB2311607	mg/L	0.0005	0.0044	0.005	89.0	40%	140%
2,4,6-Trichlorophenol	LB2311607	mg/L	0.0005	0.0048	0.005	95.6	40%	140%

The evaluation of recoveries for Laboratory Control Samples (LCS): All recoveries of LCS on this batch are in the controlled range, which meet the acceptance criteria of lab quality control.

## Laboratory Duplicate(DUP)

Relative deviation(RD)%=|Sample Result -Duplicate Result|\*100/(Sample Result +Duplicate Result).

Parameter	Sample ID	Unit	MDL	Sample Result	Duplicate Result	RD%	RD Control Range%	Sur Control Range
-----------	-----------	------	-----	---------------	------------------	-----	-------------------	-------------------

## Determination of trace elements in waters and wastes by inductively coupled plasma-mass spectrometry Method: USEPA 200.8-1994

Arsenic (As)	SHE23-01445.001	mg/L	0.050	<0.05	<0.05	0.0	≤20	-
Barium (Ba)	SHE23-01445.001	mg/L	0.010	<0.01	<0.01	0.0	≤20	-



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
 3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233 t (86-21) 61072828 f (86-21) 61152164 www.sgsgroup.com.cn  
 中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t (86-21) 61072828 f (86-21) 61152164 e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)



## Laboratory Duplicate(DUP)

Relative deviation(RD)%=|Sample Result -Duplicate Result|\*100/(Sample Result +Duplicate Result).

Parameter	Sample ID	Unit	MDL	Sample Result	Duplicate Result	RD%	RD Control Range%	Sur Control Range
-----------	-----------	------	-----	---------------	------------------	-----	-------------------	-------------------

## Determination of trace elements in waters and wastes by inductively coupled plasma-mass spectrometry Method: USEPA 200.8-1994 (continued)

Cadmium (Cd)	SHE23-01445.001	mg/L	0.001	0.009	0.008	2.8	≤20	-
Chromium (Cr)	SHE23-01445.001	mg/L	0.010	<0.01	<0.01	0.0	≤20	-
Lead (Pb)	SHE23-01445.001	mg/L	0.010	1.47	1.47	0.1	≤20	-
Selenium (Se)	SHE23-01445.001	mg/L	0.050	<0.05	<0.05	0.0	≤20	-
Silver (Ag)	SHE23-01445.001	mg/L	0.010	<0.01	<0.01	0.0	≤20	-

## Metals-Hg Method: USEPA 7473-2007

Mercury (Hg)	SHE23-01445.001	mg/L	0.005	<0.005	<0.005	0.0	≤10	-
--------------	-----------------	------	-------	--------	--------	-----	-----	---

## VOCs Method: USEPA 8260D-2018

Benzene	SHE23-01445.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤30	-
Carbon tetrachloride	SHE23-01445.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤30	-
Chlorobenzene	SHE23-01445.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤30	-
Chloroform	SHE23-01445.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤30	-
1,4-Dichlorobenzene	SHE23-01445.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤30	-
1,2-Dichloroethane	SHE23-01445.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤30	-
1,1-Dichloroethene	SHE23-01445.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤30	-
2-butanone(MEK)	SHE23-01445.001	mg/L	0.020	<0.02	<0.02	0.0	≤30	-
Tetrachloroethene	SHE23-01445.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤30	-
Trichloroethene	SHE23-01445.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤30	-
Vinyl chloride	SHE23-01445.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤30	-

## SVOCs Method: USEPA 8270E-2018

2-Methylphenol	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
3&4-Methylphenol	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
2,4-Dinitrotoluene	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
Hexachlorobenzene	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
Hexachlorobutadiene	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
Hexachloroethane	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
Nitrobenzene	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
Pentachlorophenol	QCO23-00230.001	mg/L	0.0025	<0.0025	<0.0025	0.0	≤17.5	-
Pyridine	QCO23-00230.001	mg/L	0.002	<0.002	<0.002	0.0	≤17.5	-
2,4,5-Trichlorophenol	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
2,4,6-Trichlorophenol	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-

## SVOCs Method: USEPA 8270E-2018

Endrin	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
γ-BHC	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CTC (Shanghai) Co., Ltd.  
Testing Center-Environmental Laboratory

3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233  
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t (86-21) 61072828 f (86-21) 61152164  
t (86-21) 61072828 f (86-21) 61152164

[www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## Laboratory Duplicate(DUP)

Relative deviation(RD)%=|Sample Result -Duplicate Result|\*100/(Sample Result +Duplicate Result).

Parameter	Sample ID	Unit	MDL	Sample Result	Duplicate Result	RD%	RD Control Range%	Sur Control Range
-----------	-----------	------	-----	---------------	------------------	-----	-------------------	-------------------

## SVOCs Method: USEPA 8270E-2018 (continued)

Toxaphene	QCO23-00230.001	mg/L	0.050	<0.05	<0.05	0.0	≤17.5	-
γ-Chlordane	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
α-Chlordane	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
Methoxychlor	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-
Heptachlor	QCO23-00230.001	mg/L	0.0005	<0.0005	<0.0005	0.0	≤17.5	-

The evaluation of Relative Deviation (RD) for Duplicates: All RD of duplicates on this batch are in the controlled range, which meet the acceptance criteria of lab quality control.

## Matrix Spike(MS)

MS Recovery%= ( MS Result-Sample Result ) \*100/Spike Added ( Related factor should be taken into consideration ) .

Parameter	Sample ID	Unit	MDL	Sample Result	MS Result	Spike Added	Recovery%	Control Range Lower	Control Range Upper
-----------	-----------	------	-----	---------------	-----------	-------------	-----------	---------------------	---------------------

## Determination of trace elements in waters and wastes by inductively coupled plasma-mass spectrometry Method: USEPA 200.8-1994

Arsenic (As)	SHE23-01445.001	mg/L	0.050	<0.050	0.204	0.2	102	70%	130%
Barium (Ba)	SHE23-01445.001	mg/L	0.010	<0.010	0.218	0.2	105	70%	130%
Cadmium (Cd)	SHE23-01445.001	mg/L	0.001	0.008	0.208	0.2	99.8	70%	130%
Chromium (Cr)	SHE23-01445.001	mg/L	0.010	<0.010	0.221	0.2	106	70%	130%
Lead (Pb)	SHE23-01445.001	mg/L	0.010	1.47	1.66	0.2	94.4	70%	130%
Selenium (Se)	SHE23-01445.001	mg/L	0.050	<0.050	0.221	0.2	110	70%	130%
Silver (Ag)	SHE23-01445.001	mg/L	0.010	<0.010	0.195	0.2	97.2	70%	130%

## VOCs Method: USEPA 8260D-2018

Benzene	SHE23-01445.001	mg/L	0.0005	<0.0005	0.0195	0.02	97.3	50%	150%
Carbon tetrachloride	SHE23-01445.001	mg/L	0.0005	<0.0005	0.0166	0.02	82.8	50%	150%
Chlorobenzene	SHE23-01445.001	mg/L	0.0005	<0.0005	0.0213	0.02	106	50%	150%
Chloroform	SHE23-01445.001	mg/L	0.0005	<0.0005	0.0193	0.02	96.6	50%	150%
1,4-Dichlorobenzene	SHE23-01445.001	mg/L	0.0005	<0.0005	0.0191	0.02	95.3	50%	150%
1,2-Dichloroethane	SHE23-01445.001	mg/L	0.0005	<0.0005	0.0185	0.02	92.6	50%	150%
1,1-Dichloroethene	SHE23-01445.001	mg/L	0.0005	<0.0005	0.0251	0.02	126	50%	150%
2-butanone(MEK)	SHE23-01445.001	mg/L	0.020	<0.020	<0.02	0.02	88.4	50%	150%
Tetrachloroethene	SHE23-01445.001	mg/L	0.0005	<0.0005	0.0192	0.02	96.2	50%	150%
Trichloroethene	SHE23-01445.001	mg/L	0.0005	<0.0005	0.0147	0.02	73.6	50%	150%
Vinyl chloride	SHE23-01445.001	mg/L	0.0005	<0.0005	0.0209	0.02	105	50%	150%

The evaluation of recoveries for Matrix Spiked (MS): All recoveries for MS on this batch are in the controlled range, which meet the acceptance criteria of lab quality control.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-TESTING SERVICES (SHANGHAI) CO., LTD.  
Testing Center-Environmental Laboratory

3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233  
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t (86-21) 61072828 f (86-21) 61152164 www.sgsgroup.com.cn  
t (86-21) 61072828 f (86-21) 61152164 e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## Matrix Spike Duplicate(MSD)

Relative deviation(RD)%=|MS Recovery% -MSD Recovery%|\*100/(MS Recovery%+MSD Recovery%).

Parameter	Sample ID	Unit	MDL	MS Recovery%	MSD Recovery%	RD%	RD Control Range%	Sur Control Range
-----------	-----------	------	-----	--------------	---------------	-----	-------------------	-------------------

## Determination of trace elements in waters and wastes by inductively coupled plasma-mass spectrometry Method: USEPA 200.8-1994

Arsenic (As)	SHE23-01445.001	mg/L	0.050	102	107	2.5	≤20	-
Barium (Ba)	SHE23-01445.001	mg/L	0.010	105	106	0.5	≤20	-
Cadmium (Cd)	SHE23-01445.001	mg/L	0.001	99.8	100	0.3	≤20	-
Chromium (Cr)	SHE23-01445.001	mg/L	0.010	106	108	0.6	≤20	-
Lead (Pb)	SHE23-01445.001	mg/L	0.010	94.4	99.4	2.6	≤20	-
Selenium (Se)	SHE23-01445.001	mg/L	0.050	110	116	2.3	≤20	-
Silver (Ag)	SHE23-01445.001	mg/L	0.010	97.2	98.2	0.6	≤20	-

## VOCs Method: USEPA 8260D-2018

Benzene	SHE23-01445.001	mg/L	0.0005	97.3	100	1.6	≤30	-
Carbon tetrachloride	SHE23-01445.001	mg/L	0.0005	82.8	82.1	0.4	≤30	-
Chlorobenzene	SHE23-01445.001	mg/L	0.0005	106	107	0.1	≤30	-
Chloroform	SHE23-01445.001	mg/L	0.0005	96.6	99.5	1.5	≤30	-
1,4-Dichlorobenzene	SHE23-01445.001	mg/L	0.0005	95.3	97.8	1.3	≤30	-
1,2-Dichloroethane	SHE23-01445.001	mg/L	0.0005	92.6	101	4.2	≤30	-
1,1-Dichloroethene	SHE23-01445.001	mg/L	0.0005	126	92.5	15.1	≤30	-
2-butanone(MEK)	SHE23-01445.001	mg/L	0.020	88.4	95.2	3.7	≤30	-
Tetrachloroethene	SHE23-01445.001	mg/L	0.0005	96.2	96.2	0.0	≤30	-
Trichloroethene	SHE23-01445.001	mg/L	0.0005	73.6	77.2	2.4	≤30	-
Vinyl chloride	SHE23-01445.001	mg/L	0.0005	105	99.4	2.6	≤30	-

The evaluation of Matrix Spiked Duplicates (MSD): All recoveries for MSD on this batch are in the controlled range, which meet the acceptance criteria of lab quality control. All RD for MS and MSD on this batch are in the controlled range, which meet the acceptance criteria of lab quality control.

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.  
Testing Center-Environmental Laboratory.

3<sup>rd</sup> Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233  
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t (86-21) 61072828 f (86-21) 61152164 www.sgsgroup.com.cn  
t (86-21) 61072828 f (86-21) 61152164 e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)