



ANALYTICAL REPORT

CLIENT DETAILS

Contact Cong Li
Client BESTON GROUP CO.,LTD
Address NO.99,Daxue
Road,Zhengzhou,China

Telephone 13273828505
Email 994931194@qq.com
Order Number -
Matrix Solid waste(2)

LABORATORY DETAILS

Manager SGS-CSTC
Laboratory Environmental Laboratory
Address SGS Mansion.No.41.No.5th
Avenue,TEDA,Tianjin,China
300457
Telephone (86-22) 65288272
Email Tianjin.env@sgs.com
Report ID TJE26-C01133R02_EN
Date Reported 2026/07/24
Date Analyzed 2026/07/09 - 2026/07/17

COMMENTS

- 1.The results apply to the sample(s) as received.
- 2.This report translated from TJE26-C01133R01_CN.

SIGNATORIES

Reported by: 张田明

Reviewed by: 顾亚陶

Approved by: 孙莹

Date: 2026/07/24

Date: 2026/07/24

Date: 2026/07/24



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Legend

"-" The parameter is not tested or not applicable
"↑" Detection limit raised
"↓" Detection limit lowered
"ND" Not Detected
"MDL" Method Detection Limit
"Ref. Value" Reference Value



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1. Laboratory Analysis Report

1.1 Solid waste Test Report

Solid waste Test Report	Sample ID		TJE26-C01133.001	TJE26-C01133.002
	Sample Name		Municipal sludge	Municipal sludge biochar
	Date Received		2026/07/09	2026/07/09
	Sample Description		Brown loose	Black loose
Parameters	Units	MDL	Solid waste	Solid waste
Cadmium(Cd)	mg/kg	0.1	1.6	3.2
Chromium (Cr)	mg/kg	0.5	100	180
Copper(Cu)	mg/kg	0.4	143	262
Nickel (Ni)	mg/kg	0.4	44.1	73.2
Lead (Pb)	mg/kg	1.4	72.2	122
Zinc (Zn)	mg/kg	1.2	1.18×10 ³	1.99×10 ³
Mercury(Hg)	mg/kg	0.002	1.70	0.008
Arsenic (As)	mg/kg	0.010	9.32	12.4



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SGS-CSTC (Tianjin) Co., Ltd.
Environment Laboratory

SGS Mansion, No.41, The 5th Avenue TEDA, Tianjin, China 300457 t (86-22) 6528 8272 f (86-22) 2529 3826 www.sgsgroup.com.cn
中国·天津市经济技术开发区第五大街41号SGS大厦 邮编: 300457 t (86-22) 6528 8272 f (86-22) 2529 3826 e sgs.china@sgs.com

2. Method List

Parameters	Analytical Methods	Units	MDL
Cadmium(Cd)	HJ 781-2016 Solid waste – Determination of 22 metal elements – Inductively coupled plasma optical emission spectrometry	mg/kg	0.1
Chromium (Cr)	HJ 781-2016 Solid waste – Determination of 22 metal elements – Inductively coupled plasma optical emission spectrometry	mg/kg	0.5
Copper(Cu)	HJ 781-2016 Solid waste – Determination of 22 metal elements – Inductively coupled plasma optical emission spectrometry	mg/kg	0.4
Nickel (Ni)	HJ 781-2016 Solid waste – Determination of 22 metal elements – Inductively coupled plasma optical emission spectrometry	mg/kg	0.4
Lead (Pb)	HJ 781-2016 Solid waste – Determination of 22 metal elements – Inductively coupled plasma optical emission spectrometry	mg/kg	1.4
Zinc (Zn)	HJ 781-2016 Solid waste – Determination of 22 metal elements – Inductively coupled plasma optical emission spectrometry	mg/kg	1.2
Mercury(Hg)	HJ 702-2014 Solid waste-determination of mercury, arsenic, selenium, bismuth, antimony-microwave dissolution/atomic fluorescence spectrometry	mg/kg	0.002
Arsenic (As)	HJ 702-2014 Solid waste-determination of mercury, arsenic, selenium, bismuth, antimony-microwave dissolution/atomic fluorescence spectrometry	mg/kg	0.010



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3. Equipment Information

Analytical Methods	Equipment Name	Equipment ID	Serial No.	Models	Manufacturers
HJ 1222-2021 7.1	Balance	CHEM-012-P	C035956978	ME802	MATTLER TOLEDO
HJ 781-2016	ICP-OES	CHEM-001-B	MY17310005	5110VDV	Agilent Technologies(China)Co.,Ltd
HJ 702-2014	AFS	CHEM-041-A	930-1109831Z9	AFS-930	JITIAN INSTRUMENTS

Remark: All the above equipment is owned by SGS.



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4. Quality Control Report

4.1 Method Blank

Parameters	Batch ID	Units	MDL	Method Blank	Control Range
HJ 781-2016 Solid waste – Determination of 22 metal elements – Inductively coupled plasma optical emission spectrometry					
Cadmium(Cd)	TJ2607698	mg/kg	0.1	<0.1	<0.4
Chromium (Cr)	TJ2607698	mg/kg	0.5	<0.5	<2.0
Copper(Cu)	TJ2607698	mg/kg	0.4	<0.4	<1.6
Nickel (Ni)	TJ2607698	mg/kg	0.4	<0.4	<1.6
Lead (Pb)	TJ2607698	mg/kg	1.4	<1.4	<5.6
Zinc (Zn)	TJ2607698	mg/kg	1.2	<1.2	<4.8
HJ 702-2014 Solid waste-determination of mercury, arsenic, selenium, bismuth, antimony-microwave dissolution/atomic fluorescence spectrometry					
Mercury(Hg)	TJ2607853	mg/kg	0.002	<0.002	<0.008
Mercury(Hg)	TJ2607853	mg/kg	0.002	<0.002	<0.008
Arsenic (As)	TJ2607853	mg/kg	0.010	<0.010	<0.040
Arsenic (As)	TJ2607853	mg/kg	0.010	<0.010	<0.040

The evaluation of Method Blank: All results of Method Blank on this batch are in the controlled range, which meet the acceptance criteria of lab quality control.

4.2 Laboratory Control Sample

Parameters	Batch ID	Units	Result	Ref. Value	Recovery %	Control Range %	
						Lower	Upper
HJ 702-2014 Solid waste-determination of mercury, arsenic, selenium, bismuth, antimony-microwave dissolution/atomic fluorescence spectrometry							
Mercury(Hg)	TJ2607853	μg	0.0209	0.0200	104	90	110
Arsenic (As)	TJ2607853	μg	2.01	2.00	100	90	110

Laboratory Control Samples Recovery%= Result*100/ Reference Value.

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



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4.3 Certified Reference Material

Parameters	Batch ID	Units	Result	Certificate No.	Ref. Value	Control Range	
						Lower	Upper
HJ 781-2016 Solid waste – Determination of 22 metal elements – Inductively coupled plasma optical emission spectrometry							
Cadmium(Cd)	TJ2607698	mg/kg	20.3	RMU006c	20.1	18.3	21.9
Chromium (Cr)	TJ2607698	mg/kg	166	RMU006c	169	155	183
Copper(Cu)	TJ2607698	mg/kg	190	RMU006c	199	183	215
Nickel (Ni)	TJ2607698	mg/kg	99.6	RMU006c	92.3	84.0	101
Lead (Pb)	TJ2607698	mg/kg	197	RMU006c	181	165	197
Zinc (Zn)	TJ2607698	mg/kg	252	RMU006c	235	216	254

The evaluation of result for Certified Reference Material (CRM): All result of CRM on this batch are in the controlled range, which meet the acceptance criteria of lab quality control.

4.4 Laboratory Duplicate

Parameters	Sample ID	Units	MDL	Sample Result	Duplicate Result	Relative Deviation (RD) %	Control Range of RD %
HJ 781-2016 Solid waste – Determination of 22 metal elements – Inductively coupled plasma optical emission spectrometry							
Cadmium(Cd)	TJE26-C01133.002	mg/kg	0.1	3.0	3.4	6.2	<35
Chromium (Cr)	TJE26-C01133.002	mg/kg	0.5	174	186	3.3	<35
Copper(Cu)	TJE26-C01133.002	mg/kg	0.4	256	268	2.3	<35
Nickel (Ni)	TJE26-C01133.002	mg/kg	0.4	72.1	74.3	1.5	<35
Lead (Pb)	TJE26-C01133.002	mg/kg	1.4	121	123	0.8	<35
Zinc (Zn)	TJE26-C01133.002	mg/kg	1.2	1.97×10 ³	2.02×10 ³	1.3	<35
HJ 702-2014 Solid waste-determination of mercury, arsenic, selenium, bismuth, antimony-microwave dissolution/atomic fluorescence spectrometry							
Mercury(Hg)	TJE26-C01133.002	mg/kg	0.002	0.009	0.008	5.9	≤20
Arsenic (As)	TJE26-C01133.002	mg/kg	0.010	12.4	12.5	0.4	≤20

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

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. When the testing values of both parallel duplicate samples are below the minimum quantitative detection limit, the calculation of RD is not required.



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4.5 Matrix Spike

Parameters	Sample ID	Units	Sample Result	Spiked Sample Result	Amount of Spiked	Recovery %	Control Range %	
							Lower	Upper
HJ 702-2014 Solid waste-determination of mercury, arsenic, selenium, bismuth, antimony-microwave dissolution/atomic fluorescence spectrometry								
Mercury(Hg)	TJE26-C01133.002	µg	0.00430	0.0202	0.0200	79.5	70	130
Arsenic (As)	TJE26-C01133.002	µg	6.43	8.32	2.00	94.5	70	130

Matrix Spike Recovery%= (Matrix Spike Result-Sample Result/Sample Weight* Spike Sample Weight) *100/Amount of Spiked.
The evaluation of recoveries for Matrix Spike: All recoveries for Matrix Spike on this batch are in the controlled range, which meet the acceptance criteria of lab quality control.

*** End of Report ***



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