

TEST REPORT

Doc No. ISSPL/QP/13/F-01

Report No.: ISSPL/EN/21-22/04247

Date: 18/02/2023

Name & Address of Customer#	M/s J.K Medical Waste Management Systems 55/5, Village-Godhan, Teh. - Chanderi - 473446, District - AshokNagar (M.P.)
Reference No.#	Your TRF Dated: 09/01/2023 (Reg No. 94753)
Material Identification with details#	Co-Processing Stack Emission Monitoring: Date and Time of Sampling: 03/01/2023 (10:00 am to 03:00 pm). Qty. 1 nos.
Sample code	94753
Date of sampling#	03.01.2023 (10:00 to 03:00)
Date of Sample testing	09/01/2023 to 18/02/2023
Sampling duration (in minutes)	300
Sampling Location#	Incinerator Stack, J.K. MS. UP, Chanderi
Sampling Protocol	IS:11255 (Pt-1) 1985 (RA 2019) & IS:11255 (Pt-3) 2008 (RA 2018)
Type of stack	MS Circular
Stack attached to	Incinerator
Stack Diameter (in meters)	0.2
Stack height (in meters)	30
Type and quantity of fuel used	BMW (Solid/Liquid)
Instrument Code & Calibration Status	ISSPL/INS/C/357 & Calibrated
Control Measures if any	Activated carbon and ventiney mist. and water scrubber
Ambient Temperature (°C)	20
Flue Gas Temperature (°C)	71

RESULTS

Measurement results PCDD/Fs:

2,3,7,8-PCDD/Fs	Result [ng/sample]	Limit of Detection [ng/sample]	Limit of Quantification [ng/sample]	I-TEF	I-TEQ Upperbound [ng/sample]
2,3,7,8-TCDD	< 0.0037	0.0037	0.0073	1	0.0037
1,2,3,7,8-PeCDD	< 0.0053	0.0053	0.011	0.5	0.0026
1,2,3,4,7,8-HxCDD	< 0.006	0.006	0.012	0.1	0.0006
1,2,3,6,7,8-HxCDD	< 0.006	0.006	0.012	0.1	0.0006
1,2,3,7,8,9-HxCDD	< 0.006	0.006	0.012	0.1	0.0006
1,2,3,4,6,7,8-HpCDD	< 0.017	0.017	0.034	0.01	0.00017
OCDD	< 0.036	0.018	0.036	0.001	0.000036
2,3,7,8-TCDF	< 0.0091	0.0046	0.0091	0.1	0.00091
1,2,3,7,8-PeCDF	< 0.0058	0.0058	0.012	0.05	0.00029
2,3,4,7,8-PeCDF	< 0.0058	0.0058	0.012	0.5	0.0029
1,2,3,4,7,8-HxCDF	< 0.0061	0.0061	0.012	0.1	0.00061
1,2,3,6,7,8-HxCDF	< 0.0061	0.0061	0.012	0.1	0.00061
1,2,3,7,8,9-HxCDF	< 0.0061	0.0061	0.012	0.1	0.00061
2,3,4,6,7,8-HxCDF	< 0.0061	0.0061	0.012	0.1	0.00061
1,2,3,4,6,7,8-HpCDF	< 0.006	0.006	0.012	0.01	0.00006
1,2,3,4,7,8,9-HpCDF	< 0.006	0.006	0.012	0.01	0.00006

Reviewed By

Authorized Signatory



SYSTEMS AND SOLUTIONS PRIVATE LIMITED

(Promoted by Indian Register of Shipping)

Testing Laboratory

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OCDF	< 0.026	0.013	0.026	0.001	0.000026
I-TEQ from quantified 2,3,7,8-PCDD/Fs - "Lowerbound"					0
I-TEQ from 2,3,7,8-PCDD/Fs - "Mediumbound"					0.0075
I-TEQ - Maximum possible - "Upperbound"					0.015
PCDDs	Result [ng/sample]	PCDF	Result [ng/sample]		
Tetra-CDDs	< 0.08	Tetra-CDF	< 0.17		
Penta-CDDs	< 0.074	Penta-CDF	< 0.16		
Hexa-CDDs	< 0.06	Hexa-CDF	< 0.097		
Hepta-CDDs	< 0.034	Hepta-CDF	< 0.024		
OCDD	< 0.036	OCDF	< 0.026		

I-TEF according to NATO.

Limits of quantification are defined as double of the detection limits.

The limit of detection is defined as the amount of analyte producing a signal with $S/N \geq 3$.

The value of the detection limit is mentioned as the actual value at the acquisition date.

Measurement uncertainty is expressed as a double ($k=2$) relative standard deviation (RSD%), and corresponds to 95% confidence interval.

Estimation of uncertainty of each 2,3,7,8-PCDD/F congener is 30% and total I-TEQ is 20%. These values were ensured by analyses of certified reference material under conditions of internal reproducibility. Results marked "<" are below limit of detection or quantification.

"Lowerbound" and "Upperbound" are levels defined in Regulation 2017/644 and EN 1948-4.

"Mediumbound" is levels defined in Regulation 2017/644.

Extraction standards - PCDDs	Recovery [%]	Extraction standards-PCDFs	Recovery [%]
13C12 - 2,3,7,8-TCDD	98	13C12 - 2,3,7,8-TCDF	97
13C12 - 1,2,3,7,8-PeCDD	99	13C12 - 1,2,3,7,8-PeCDF	97
13C12 - 1,2,3,6,7,8-HxCDD	98	13C12 - 1,2,3,6,7,8-HxCDF	83
13C12 - 1,2,3,4,6,7,8-HpCDD	98	13C12 - 1,2,3,4,6,7,8-HpCDF	78
13C12 - OCDD	99		
Sampling standards	Recovery [%]		
37Cl4-2,3,7,8-TCDD	98		
13C12-1,2,3,4,7,8-HxCDD	97		
13C12-2,3,4,7,8-PeCDF	97		
13C12-1,2,3,4,7,8-HxCDF	95		
13C12-1,2,3,4,7,8,9-HpCDF	98		

*Parameters subcontracted to NABL Lab.

Remark: Sampling done by ISSPL Representative (Mr. Dinesh Jangid)

--End of the Report--