ISO-KINETIC SAMPLING CHECKLIST

J-PAL Industry ID					
Industry Name					
Stack Number with Stack Name					
Name of the environmental laboratory performing sampling					
Lab's team lead's name					
Lab team No.		Date		Time	

	Sr.	Check		Response	Remarks
Kit Number	1.1	Calibrated sampling kit number			
Other Equipments & positioning	2.1	Flue gas analysis	Device used	☐ Portable gas analyzer ☐ Orsat ☐ Not used	
	2.2	Item present in the Impinger	Chilled water	☐ Yes ☐ No	
	2.3		Silica gel	☐ Yes ☐ No	
	2.4		Silica gel color	☐ Blue/Pink ☐ Grey ☐ NA	
	2.5	Are these equipments positioned at the stack platform	Sampling kit	☐ Yes ☐ No ☐ NA	
	2.6		Impinger	☐ Yes ☐ No ☐ NA	
	2.7		Dry gas meter	☐ Yes ☐ No ☐ NA	
	2.8		Pump	☐ Yes ☐ No ☐ NA	
	2.9		Convenient to take equipment to the platform?	☐ Yes ☐ No ☐ NA	
Steps for sampling	3.01	Stack diameter			
	3.02	Stack temperature			
	3.03	Thimble number			
	3.04	Area of the selected nozzle			
	3.05	Sampling: start time			
	3.06	Sampling: finish time			
	3.07	Pre-leak test performed		☐ Yes ☐ No ☐ NA	
	3.08	Post-leak test performed		☐ Yes ☐ No ☐ NA	
	3.09	Inclined manometer adjusted		☐ Yes ☐ No ☐ NA	

	3.10	No. of traverse points used for velocity calculation		
	3.11	No. of traverse points used for sampling		
	3.12	Marking of traverse point proper (collar length considered)	☐ Yes ☐ No	
	3.13	Sampling probe, pitot tube and thermocouple clamped together	☐ Yes ☐ No ☐ NA	
	3.14	Gas analyzer used to calculate Molecular weight	☐ Yes ☐ No	
	3.15	Molecular weight corrected with moisture percentage	☐ Yes ☐ No	
	3.16	Molecular weight after correction		
	3.17	LPM set at (for PM chamber)		
	3.18	LPM set at (for gas chamber)		
	3.19	LPM observed @ time		
	3.20	DGM initial reading		
	3.21	DGM reading observed @ time		
	3.22	DGM final reading		
	3.23	Sampling probe / pitot tube held horizontally (should be at 90 degrees from stack)	☐ Yes ☐ No ☐ NA	
	3.24	Nozzle in the direction of flow (Assuming port to be the centre of clock, nozzle should be at 6 o' clock)	☐ Yes ☐ No ☐ NA	
	3.25	Thimble stored in thimble cover	☐ Yes ☐ No	

CALCULATION SHEET

Sample No.		Pitot Constant		DGM Calibration Factor	
Thimble No.				Initial Weight of Thimble	

1.	Barometric Pressure (mm of Hg)		:								
	Leak check of Pitot		:	1) ☐ Done 2) ☐ Not Done							
2.	Traverse points in cm		:		T1	T2	T3	T4	T5	T6	T7	T8
				From Wall								
				With Collar								
3.	Composition in Flue Gas		:	CO_2								
				O_2								
				SO_x								
				NO_X								
				N_2+CO								
4.	Dry Molecular Weight of Flue		:								
5.	Moisture Content (%)		:								
6.	Wet Molecular Weight of Flue		:								
7.	Stack Temperature of Flue		:	T1	T2	T3	T4	T5	T6	T7	T8
		°C									
		K									
8.	Differential Pressure (mm of WC)		:	T1	T2	T3	T4	T5	T6	T7	T8
9.	Static Pressure (mm of WC)		:	T1	T2	T3	T4	T5	T6	T7	T8

10.	Absolute Static Gas Pressure (mm of WC)	:	T1	T2	T3	T4	T5	T6	T7	T8
11.	Velocity of Flue Gas (m/sec)	:	T1	T2	T3	T4	T5	T6	T7	T8
12.	Discharge at Nozzle (m3/sec)	:	T1	T2	T3	T4	T5	T6	T7	T8
13.	Initial Temperature at Meter	:								
14.	Initial Vacuum	:								
15.	Flow rate at Meter (LPM)	:	T1	T2	T3	T4	T5	T6	T7	T8
16.	Initial DGM reading (m3)	:								
17.	Time Duration of Sampling (minutes)	:	T1	T2	T3	T4	T5	T6	T7	T8
18.	Volume of Gas Passed (m3)	:	T1	T2	T3	T4	T5	T6	T7	T8
19.	Final Vacuum (mm of Hg)	:	T1	T2	T3	T4	T5	T6	T7	T8
20.	Final reading of DGM (m3)	:								
21.	Volume recorded in DGM (m3)	:								
22.	Final Temperature at Meter (K)	:								
23.	Normalized Calculated Volume (m3)	:								
24.	Normalized DGM Volume (m3)	:								
25.	Isokineticity	:								
26.	Final Weight of Thimble	:								