

**Form IV A**  
**[See rule 13 (2)]**

Format for submission of the Annual Report Information on Bio- Medical Waste Management (to be submitted by the State Pollution Control Committees and Director General Armed Forces Medical Services to Central Pollution Control Board on or before 31<sup>st</sup> July of every year for the period from January to December of year 2020)

1)	Name of Organization	:	Kerala State Pollution Control Board
2)	Name of Nodal Officer with contact telephone number and e-mail	:	Er. Premaletha S., Environmental Engineer Head Office, TVM <a href="mailto:ms.kspcb@gov.in">ms.kspcb@gov.in</a> <a href="mailto:pcbhoawareness2@gmail.com">pcbhoawareness2@gmail.com</a> 9447975725 0471-2318151
3)	Total no. of Health Care Facilities/ Occupiers	:	17122
i)	Bedded Hospitals and Nursing Homes ( bedded)	:	2027
ii)	Clinics, Dispensaries	:	9255
iii)	Veterinary Institutions	:	585
iv)	Animal houses	:	31
v)	Pathological Laboratories	:	2602
vi)	Blood Banks	:	23
vii)	Clinical establishment	:	1366
viii)	Research Institutions	:	5
ix)	AYUSH	:	1228
4)	Total no. of beds	:	119762
5)	Status of authorization: :		
i)	Total no. of Occupiers applied for authorization	:	13736
ii)	Total no. of Occupiers granted authorization	:	13348

iii)	Total no. of application under consideration	:	79
iv)	Total no. of application rejected	:	322
v)	Total no. of Occupiers in operation without applying for authorization	:	2471
6)	Quantity of Bio- Medical Waste Generation (in kg/day) (please ensures District wise Bio- Medical Waste Generation as per Part-2)		
i)	Bio medical waste generation by bedded hospitals ( <b>in kg/day</b> )	:	35849kg/D
ii)	Bio- medical waste generation by non-bedded hospitals ( <b>in kg/day</b> )	:	4058 kg/D
iii)	Any other	:	501 kg/D
	<b>Total:40408kg/day ( Non-COVID -27912 kg/D, COVID -12496 kg/D)</b>		
7)	Bio- medical waste treatment and disposal	:	
a)	By Captive bio- medical waste treatment and disposal by Health Care Facilities ( please enclose details as per ( part-3)		
i)	Number of Health Care Facilities having captive treatment and disposal facilities	:	51
ii)	Total bio-medical waste treated and disposed by captive treatment facilities in <b>kg /day</b>	:	3390 kg/D
b)	Bio-medical waste treatment and disposal by common Bio medical Waste Treatment Facilities ( please enclose as per Part4)	:	
i)	Number of common Bio Medical Treatment Facilities in Operation	:	1
ii)	Number of common Bio Medical Treatment Facilities under construction	:	1
iii)	Total Bio- Medical waste treated in <b>kg/day</b>	:	36817 kg/D
iv)	Total treated bio- medical waste disposed through authorised recyclers ( in <b>kg/day</b> )	:	8238187 kg/year(22570 kg/day ave.)
8)	Total no. of violation by		

i)	Health care Facilities ( bedded and non-bedded)	:	132
ii)	Common Bio Medical Waste Treatment Facilities	:	nil
iii)	Other (please specify)	:	1245
9)	Show cause notice/direction issued to defaulter	:	
i)	Common Bio Medical Waste Treatment Facilities	:	Nil
ii)	Others	:	1179
10)	Any other relevant information		
i)	Number of workshops/training conducted during the year	:	20 (Awareness training and seminars through VC) conducted by the Board 8746 by the cbwtf,IMAGE
ii)	Number of Occupiers installed liquid waste treatment facility	:	All health care facilities were provided disinfection system for bio medical liquid waste. STPs provided in 149 bedded hospitals and all other hcfs were provided septic tank-soak pit system
iii)	Number of captive incinerators complying to the norms	:	19 hospitals provided incinerators. Directions were issued to these for upgradation of incinerators to meet CPCB emission standard. These hospitals had not disposed COVID waste through these incinerators
iv)	Number of occupiers organized trainings	:	
v)	Number of occupiers constituted Bio-medical waste management committees	:	Major bedded hospitals were formed management committees. In small hcfs staffs were deputed especially for the management of BMW
vi)	Number of occupiers submitted annual Report for the previous calendar year	:	2487
vii)	Number of occupiers practicing pre-treatment of lab microbiology and biotechnology waste		2014
viii)	Number of Common Bio Medical Waste Treatment facilities that have installed continuous Online Emission Monitoring systems	:	1

**Part 2: District-wise Bio- Medical Waste Generation (for the previous calendar year 2020)**

Sl. No	Name of the State/ Union Territory	Name of the State/union Territory	Bio-Medical Waste Generation (in kg/day)	Existing Total Bio- Medical treatment capacity captive and CBMW kg/day	
	Kerala State Pollution Control Board		<b>40408kg/day ( both COVID and non-COVID BMW)</b>	Equipment	
				Incinerator IMAGE - Captive facilities	35 T/D 8.6 T/D
				Autoclave	20T/D
				Shredder	15 T/D
				Deep Burial(in hcfs in idukki)	0.037T/D
				Sharp encapsulation pit at IMAGE	1T/D(20no )

- *Deep burial was practiced in some health care facilities in Idukki district in 2020. But now all these are affiliated with cbwtfs*

**Part 3: Information of Health Care Facilities having captive treatment facilities (for the previous calendar year 2020)(copy attached as Annexure)**

**Part 4 : Information on Common Bio Medical Waste Treatment and Disposal Facilities ( for the previous calendar year 2020)**

Sl. No	Name and Address of the common Bio Medical Waste Treatment Facilities with contact person name and telephone no.	GPS Co-ordinates	Coverage Area in KMS	Name of the cities/areas covered by common Bio-Medical Waste Treatment facilities	Total number of Health Care Facilities being covered	Total number of beds covered	Total Quantity of Bio Medical Waste collected from member Health Care Facilities ( kg/day)	Capacity of Treatment equipment installed by Common Bio Medical Waste Treatment Facilities			Total Bio-Medical Waste treated in Kg/day	Method of Disposal of treated wastes ( incineration Ash/sharps/Plastic)
								Equipment	Numbers	Total installed capacity ( kg/day)		
1	<b>IM-AGE,CBWT F, MAN-THURUTHI, KAN-JIKODE WEST, PALAKKAD 678623</b>	Latitude- 10* 48' 54" N Longitude- 76* 43' 34" E	400 km from Parasala+38 0km from Manjeswararam	Entire State	16,602	1,63,474	36.8 t/D					
								Incinerator	5	35t/D	4940 t/annum (13.5 T/D)	Incineration Ash: Quantity disposed By
								Plasma paralysis			nil	
								Autoclave	5	20T/D	5912T/annum(16 T/D)	Sharps
								Hydro-clave				Quantity Disposed by
								Shredder	3	15T/D		Plastics Quantity
								Sharp encapsulation or concrete pit	20	1 T/D	259t/annum(0.7 t/D)	
								Deep burial pits		NIL	NIL	NIL
								Any other equipment	3	sorting conveyors shredder cum wash-		

										ing ma- chine s		
										Chem ical disin- fec- tion(b ottle wash- ing ma- chine )	8 T/D	
								Effluent Treatment plant	ETP -4.5 lakh L/D ay	ZLD		
								Sub- total	<b>55.8 T/day</b> (incineration + autoclave)			

- Total No. of transportation vehicles used for collection of Bio- Medical Waste on daily basis by the common Bio- Medical Waste Treatment facilities:**71 vehicles**
- List of Health Care Facilities not have membership with the Common Bio- Medical Waste Treatment facilities and neither having captive treatment facilities: **NIL**
- No. of trainings organized by the Common Bio- Medical Waste Treatment facility operators:**8746**
- No. of Accidents reported by the Common Bio Medical Waste Treatment Facilities : **Nil**

**Part 2: District wise details of HCFs**

Name of district	Name of State	Total number of HCFs	Bio medical waste generation (captive & CBWTF) in kg/day
Thiruvananthapuram	KERALA	1326	6294
Kollam	KERALA	1725	3003
Alappuzha	KERALA	764	3069
Pathanamthitta	KERALA	905	2331
Kottayam	KERALA	1136	2960
Idukki	KERALA	864	1420
DO1, Ernakulam	KERALA	1267	3783
DO2,Ernakulam	KERALA	660	1104
Thrissur	KERALA	1717	4871
Palakkad	KERALA	1040	1470
Malappuram	KERALA	1986	2732
Kozhikkodu	KERALA	1509	3655
Wayanad	KERALA	337	368
Kannur	KERALA	1245	2536
Kasargodu	KERALA	420	663
ESC,Eloor,EKM	KERALA	221	149
Total		17122	40408