

# Indraprastha Medical Corporation Limited

(Indraprastha Apollo Hospitals, New Delhi - A Joint Sector Venture of Govt. of Delhi)

Regd. Office : Sarita Vihar, Delhi-Mathura Road, New Delhi-110 076 (India)

Corporate Identity Number : L24232DL1988PLC030958

Phones : 91-11-26925858, 26925801, Fax : 91-11-26823629

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Engg/CE/BMW/2018-19//02

18 June 2018

Delhi Pollution Control Committee

Bio-Medical Waste Cell,  
4<sup>th</sup> Floor, ISBT Building,  
Kashmere Gate, Delhi-06.

20/06/18  
INQUIRY COUNTER  
DELHI POLLUTION CONTROL COMMITTEE  
DEPARTMENT OF ENVIRONMENT  
GOVT. OF NCT OF DELHI  
4TH FLOOR, ISBT BUILDING,  
KASHMERE GATE, DELHI-110006

Sub: Annual Report (Form- IV) for the year 2016 under Bio-Medical Waste Rule 2016

Please Find enclosed the Annual Report for the year 2017 as per Bio- Medical Waste Management & Handling Rules, 2016.

Thanking You

For INDRAPRASTHA MEDICAL CORPORATION LTD.



Viyom Kumar Gupta  
Chief Engineer

**Form - IV**  
**(See rule 13)**  
**ANNUAL REPORT**

[To be submitted to the prescribed authority on or before 30<sup>th</sup> June every year for the period from January to December of the preceding year, by the occupier of health care facility (HCF) or common bio-medical waste treatment facility (CBWTF)]

Sl. No.	Particulars		
1.	Particulars of the Occupier	:	
	(i) Name of the authorized person (occupier or operator of facility)	:	Ashok Bajpai
	(ii) Name of HCF or CBMWTF	:	Indraprastha Medical Corporation Ltd Ltd
	(iii) Address for Correspondence	:	Sarita Vihar, Delhi Mathura Road , New Delhi 110076
	(iv) Address of Facility		Same as above
	(v) Tel. No, Fax. No	:	011-29871918/ Fax 26825600
	(vi) E-mail ID	:	Viyom_g@apollohospitalsdelhi.com
	(vii) URL of Website		www.apollohospitalsdelhi.com
	(viii) GPS coordinates of HCF or CBMWTF		
	(ix) Ownership of HCF or CBMWTF	:	(State Government or Private or Semi Govt. or any other) – Private in collaboration with Delhi Govt
	(x). Status of Authorization under the Bio-Medical Waste (Management and Handling) Rules	:	Authorization No.: Applied for renewal on 08.05.2018
	(xi). Status of Consents under Water Act and Air Act	:	Valid up to: Consent # DPCC/WMC/2018/42638 valid upto 22.01.2023
2.	Type of Health Care Facility	:	
	(i) Bedded Hospital	:	No. of Beds:....750
	(ii) Non-bedded hospital (Clinic or Blood Bank or Clinical Laboratory or Research Institute or Veterinary Hospital or any other)	:	
	(iii) License number and its date of expiry		
3.	Details of CBMWTF	:	Not Applicable
	(i) Number healthcare facilities covered by CBMWTF	:	Not Applicable
	(ii) No of beds covered by CBMWTF	:	Not Applicable
	(iii) Installed treatment and disposal capacity of CBMWTF:	:	_____ Kg per day - Not Applicable

	(iv) Quantity of biomedical waste treated or disposed by CBMWTF :	_____ Kg/day - Not Applicable			
4.	Quantity of waste generated or disposed in Kg per annum (on monthly average basis) – <b>As per details attached in Annexure I</b>	Yellow Category :26308 bags (Weight 80487.46 kg)			
		Red Category : 51496 bags (weight 172900) kg			
		White: 3762 (Nos) Average weight: 4878.54			
		Blue Category : 9902 bags , weight 33528.39			
		General Solid waste:			
5	Details of the Storage, treatment, transportation, processing and Disposal Facility				
	(i) Details of the on-site storage facility :	Size : 830 Sqft			
		Capacity :			
		Provision of on-site storage : (cold storage or any other provision) - NO			
	(ii) Details of the treatment or disposal facilities :	Type of treatment equipment	No of units	Capacity Kg/day	Quantity treated or disposed in kg per annum
		Incinerators Plasma Pyrolysis Autoclaves	2 Nos	972 ltrs (80 KG) , 472 ltrs	As per annexure attached
		Microwave Hydroclave			
		Shredder – 1 Nos 50 KG			
		Needle tip cutter or Yes destroyer Sharps encapsulation or concrete pit Deep burial pits:			
	(iii) Quantity of recyclable wastes sold to authorized recyclers after treatment in kg per annum.	Not applicable			
	(iv) No of vehicles used for collection and transportation of biomedical waste	Not applicable			
	(v) Details of incineration ash and ETP sludge generated and disposed	Quantity generated	Where disposed		

	during the treatment of wastes in Kg per annum	Incineration Ash ETP Sludge – sent to Common bio medical waste treatment facility
	(vi) Name of the Common Bio-Medical Waste Treatment Facility Operator through which wastes are disposed of	M/s Biotic waste solutions pvt ltd.
	(vii) List of member HCF not handed over bio-medical waste.	
6	Do you have bio-medical waste management committee? If yes, attach minutes of the meetings held during the reporting period	Yes, copy of minutes attached in Annexure II
7	Details trainings conducted on BMW	
	(i) Number of trainings conducted on BMW Management.	<b>346 Sessions</b>
	(ii) number of personnel trained	<b>9986</b>
	(iii) number of personnel trained at the time of induction	<b>2073</b>
	(iv) number of personnel not undergone any training so far	-
	(v) Whether standard manual for training is available?	Yes
	(vi) any other information)	
8	Details of the accident occurred during the year	NIL
	(i) Number of Accidents occurred	
	(ii) Number of the persons affected	
	(iii) Remedial Action taken (Please attach details if any)	
	(iv) Any Fatality occurred, details.	
9.	Are you meeting the standards of air Pollution from the incinerator? How many times in last year could not met the standards?	- Not applicable
	Details of Continuous online emission monitoring systems installed	Not applicable
10	Liquid waste generated and treatment methods in place. How many times you have not met the standards in a year?	Liquid waste treatment by STP. Have been meeting standards
11	Is the disinfection method or sterilization meeting the log 4	Autoclaving is being done

	standards? How many times you have not met the standards in a year?		
12	Any other relevant information	:	(Air Pollution Control Devices attached with the Incinerator) – Not Applicable.

Certified that the above report is for the period from **(January – December)**

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 .....  
 .....  
 .....

*Abayori*

Name and Signature of the Head of the Institution

Date:  
 Place

*by*

Client/Sub-Centre -Id

:020510037

**BMW Collection Report [Member/SubCentre Wise] [Month Wise] in kgs**

FROM

2017-04 TO 2018-03

Client/Sub-Centre Name

:Indraprastha Apollo Hospital

S.No	Month	Year	Yellow		Blue		Red		White		Sharps		Others		Total	
			Bag	Wt	Bag	Wt	Bag	Wt	Bag	Wt	Bag	Wt	Bag	Wt	Bag	Wt
	May	2017	2	21.71	2	38.11	8	106.77	0	0.00	0	0.00	0	0.00	12	166.59
	June	2017	1786	5160.74	724	1918.77	3837	12707.71	0	0.00	0	0.00	0	0.00	6347	19787.22
	July	2017	2738	8216.28	1063	3208.49	5985	19807.14	341	344.40	0	0.00	0	0.00	10127	31576.30
	August	2017	2778	9008.53	1079	3846.52	5216	17583.05	558	602.09	0	0.00	0	0.00	9631	31040.19
	5 September	2017	2768	8343.68	1111	3743.82	4925	16679.14	537	655.51	0	0.00	0	0.00	9341	29422.15
	October	2017	2427	7374.80	872	2882.34	4704	15561.06	506	710.69	0	0.00	0	0.00	8509	26528.89
	November	2017	2694	8537.70	985	3669.08	5360	17727.56	472	675.89	0	0.00	0	0.00	9511	30610.23
	December	2017	2733	7958.83	998	3321.42	5561	18605.05	442	680.93	0	0.00	0	0.00	9734	30566.23
	January	2018	3001	8578.84	1073	3607.48	5432	17373.89	588	745.34	0	0.00	0	0.00	10094	30305.55
	February	2018	2653	8559.60	928	3290.55	4251	14953.78	285	426.96	114	151.06	0	0.00	8231	27381.95
	March	2018	2728	8726.75	1067	4001.81	6217	21794.93	33	36.75	353	468.61	0	0.00	10398	35028.85
			26308	80487.46	9902	33528.39	51495	172900.07	3762	4876.54	467	619.67	0	0.00	91935	292414.14



**FORM I**

(See rule 4(O), 5(i) and 15(2))

**ACCIDENT REPORTING**

1. Date and time of accident : NIL
2. Type of Accident : No such incident
3. Sequence of events leading to accident : No such incident
4. Has the Authority been informed immediately : No such incident
5. The type of waste involved in accident: : No such incident
6. Assessment of the effects of the accidents on human health and environment : NIL
7. Emergency measures taken : No such incident
8. Steps take to alleviate the effects of accidents : No such incident
9. Steps taken to prevent the recurrence of such an accident : No such incident
10. Does your facility has an Emergency control policy? If yes give details

**Yes, the organization has a protocol on management of Needle Stick injury, accident, inoculation and percutaneous, mucus, membrane, exposure to blood and body fluid. (P.50 Infection Control Manual)**

Date

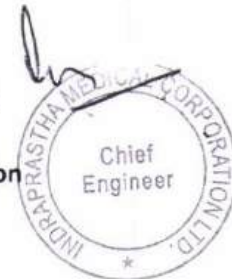
18-06-2018

Place

New Delhi

Signature

Designation



February 10, 2018

**CIRCULAR**

This is for the information of all concerned as addition of new member in new Bio Medical waste management committee per requirement of Bio Medical Waste Management Rule 2016. The list of members is as following:

S.No	Name	Designation
1.	Mr. Ashok Bajpai	Managing Director
2	Mr. Gagan Sehgal	Chief Operating officer
3	Dr. Raman Sardana	Head Infection prevention & control and coordinator Laboratory services
4	Ms. Yogamaya Nayak	Head Quality
5	Mr. Rohit Kapoor	Senior GM HR
6	MR. Viyom Gupta	Senior GM Engineering
7	Mr. Sachin Patidar	GM Materials
8	Sister Gracy Phillip	Nursing Superintendent
9	Dr. Gaurav Katyal	Dy. GM Operations
10	Ms. Sarla Kachroo	Dy. GM Housekeeping
11	Dr. Priti Bansal	Dy. Medical Superintendent
12	Mr. Anupam Srivastava	Head – Training Cell
13	Dr. Leena Mendiratta	Infection Control Officer





**Minutes of the Meeting**

**Date 10.04.2018**

**Bio Medical Rules 2016 - Ammendments - Bio Medical Waste  
Management Rules 2018**

Members Present :

Jaideep Gupta, Gagan Sehgal , Rohit Kapoor, Dr. Sardana, Viyom Gupta, Sachin Patidhar, Garacy Phillip,  
Anupam Shirvastav, Dr. Leena, Dr, Ranu Khan, Dr. Gaurav Katyal, Sarla Kachroo, Anuradha Mishra,  
Gursharan & Aarti Kalia

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## “Biomedical Waste Management Amendment Rules 2018”

*Previously known as Bio-Medical Waste (Management  
& Handling) Rules 2016*

w.e.f 16.03.2018



### DEFINITION

- **Bio-medical waste** means any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps, including the categories mentioned in **Schedule I** appended to these rules.



## NEW RULES MANDATE



Bar Coding for all Bags (by 27<sup>th</sup> March 2019)



Pre – Treatment of Lab Waste



Phase out chlorinated plastic bags, blood bags & gloves by 27<sup>th</sup> March 2019)



Needle & syringe destroyer along with Puncture proof box



Puncture Proof Leak proof boxes or containers with blue color marking



Annual Report (Form IV A)



Website (by 27<sup>th</sup> March 2019)



TRAINING & IMMUNIZATION



## BARCODING



- Establish a BAR CODE system for bags or containers containing bio medical waste to be sent out of the premises or place for any purpose.
- TIMELINES FOR IMPLEMENTATION : Within 2 year of notification of amendment rules.



## LABORATORY WASTE

- Microbiology, Biotechnology and
- other clinical laboratory waste
- Blood bags, Laboratory cultures, stocks or specimens of microorganisms, live or
- attenuated vaccines, human and animal cell cultures used in research, industrial
- laboratories, production of biological, residual toxins, dishes and devices used for cultures



## NEW PRACTISE

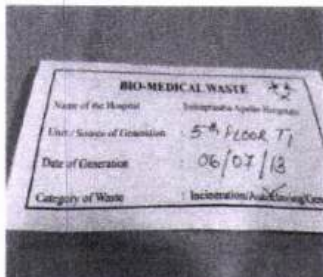
Autoclavable  
Laboratory Waste



## NON- CHLORINATED PLASTIC BAGS



## NEW LABEL



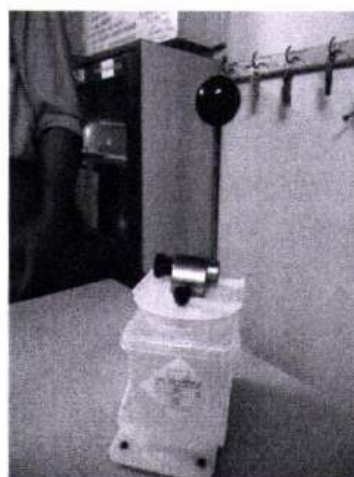
BEFORE



AFTER



## NEEDLE DESTROYER



## GLASS WARE -

Replace blue plastic bags with Cardboard boxes with blue colored marking. Puncture proof / leak proof boxes or containers for glass ware items.



## ANNUAL REPORT – New Additions

- Details trainings conducted on BMW
  - (i) Number of trainings conducted on BMW Management.
  - (ii) Number of personnel trained
  - (iii) Number of personnel trained at the time of induction
  - (iv) Number of personnel not undergone any training so far
  - (v) whether standard manual for training is available?
  - (vi) any other information



- Do you have bio-medical waste management committee?
- If yes, attach minutes of the meetings held during the reporting period
- Report major accidents including accidents caused by fire hazards, blasts during handling of biomedical waste and the remedial action taken and the records relevant thereto (including nil report) in Form I within twenty-four hours and also along with the annual report

**TIMELINE : to be sent to Delhi Pollution Control Committee (DPCC) on or before 31<sup>th</sup> July every year.**



## WEBSITE



- Maintain and update on day to day basis the bio-medical waste management register and display the monthly record on its website
- **TIMELINES FOR IMPLEMENTATION :**  
Within 2 year





## TRAINING & IMMUNIZATION

- Provide training for all its workers involved in handling of bio-medical waste at the time of induction and at least once a year thereafter
- Immunize all its workers involved in handling of bio-medical waste for protection against diseases including Hepatitis B and Tetanus, that are likely to be transmitted while handling bio-medical waste and maintain the records for the same



IMMUNIZE



## Addition / Changes in clauses

- Application : Rule (2 c) Municipal Solid Waste (Management & Handling Rules 2000 – Solid Waste Management Rules 2016)
- Application : Rule ( 2 e) Hazardous Wastes (Management & Transboundary Movement ) rules 2008 – Hazardous and other wastes (Management & Transboundary Movement rules 2016)
- Application : Rule 2 f) E- Waste (Management & Handling) rules 2011- E-Waste Management rules 2016
- Rule 4 : Addition of – guidelines on safe management of wastes from health care activities and WHO Blue Book 2014 and then sent to Common Bio- Medical Waste treatment facility for final disposal.
- Rule 4 Clause (d): Phase out use of chlorinated plastic bags (excluding blood bags) and gloves by 27<sup>th</sup> March 2019.
- Rule 4 (i) Establish a Barcode system for bags or containers containing bio medical waste to be sent out of premises or place " Place for any purpose one year from the date of notification of these rules further treatment and guidelines issued by Central Pollution Control Board by 27<sup>th</sup> March 2019.



### Addition / Changes in clauses (Cont..)

- Rule 4 (p) – make available the annual report on its website and all the healthcare facilities shall make own website within two years from the date of notification of these rules – all the healthcare facilities shall make own website within two years from the publication of Bio Medical Waste Management Rules 2018.
- Rule 5 (d) - Establish a barcoding and global positioning system for handling of bio medical waste within one year – in accordance with the guidelines issued by Central Pollution control Board by 27<sup>th</sup> March 2019.
- Rule 5 (p) The Plastic Waste Management Rules 2011 the words and figures “ the Plastic Waste Management Rules 2016.



### Addition / Changes in clauses (Cont..)

#### • Schedule I

Category	Type of Waste	Type of Bags or containers	Treatment & Disposal
Yellow	Discarded Linen Mattresses , beddings contaminated with blood or body fluid routine mask & Gowns	Non- Chlorinated yellow plastic bags or suitable packing material	Non- Chlorinated chemical disinfection followed by incineration or plazma pyrolysis or for energy recovery.
Yellow	Microbiology, Biotechnology and other clinical laboratory waste	Autoclave or microwave or Hydroclave safe plastic bags or containers	Pre-treat to sterilize with non- chlorinated chemicals on-site as per National AIDS Control Organization or World Health Organization guidelines on Safe management of wastes from health care activities and WHO blue book 2014 thereafter for Incineration -



## Addition / Changes in clauses (Cont..)

### • Schedule I Part I

Category	Type of Waste	Type of Bag or container	Treatment & Disposal
Blue	Glassware – Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes	Cardboard boxes with blue coloured marking – Puncture Proof and leak proof boxes or containers with blue coloured marking	Non- Chlorinated chemical disinfection followed by incineration or plazma pyrolysis or for energy recovery.
Blue	Metallic Body Implants	Cardboard boxes with blue coloured marking – Puncture Proof and leak proof boxes or containers with blue coloured marking	
Schedule I Part II	Chemical treatment using at least 10% sodium hypochlorite – 1% to 2%		



## PROGRESS SO FAR

Bar Coding	In process
Pre – Treatment of Laboratory Waste	√
Label updation	√
Use of Non Chlorinated bags for below:	
Plastic bags	√
Blood bags	×
Gloves	√
Needle & syringe destroyer	√
Puncture proof boxes (blue bags)	In process
Annual Report	31 <sup>st</sup> July every year
Website	27 <sup>th</sup> March 2020
Training	√
Immunization	√





**Minutes of the Meeting**

**Date 10.11.2017**

**Bio Medical Rules 2017 FOLLOW UP MEETING**

Members Present :

Jaideep Gupta, Gagan Sehgal , Rohit Kapoor, Dr. Sardana, Viyom Gupta, Sachin Patidhar, Garacy Phillip,

	<b>Points</b>	<b>Responsibility</b>	<b>Action / Plan</b>
1	Liquid waste - Pre - treat the laboratory waste , microbiological waste blood samples and blood bags through disinfection or sterilization on site in the manner as perscribed by WHO or NACO and then sent to the CBMWTF for final disposal. Ensure segregation of liquid chemical waste at source and ensure pre- treatment of neutrilization piror to mixing with other effluent generated from health care facilities  Waste from vaccination room to be handled in the same way	Dr. Raman Sardana / Sarla Kachroo  User Department / HK	For Red category waste - autoclave procedure started. For lab efflunet drain channlelized to HVAC plant room and hypo treatment started.  Lab waste Identified , seggregated and transported  To be decided by user department & HK
2	Procedure for collection , stroage and transporation of used blood bags to be decided	Nursing / HK & Infection Control Department	Pending Yet to be decided
3	New Yellow bags with red colour printing, sutable for autoclave to be proccured. This is to identify incenerable waste from laboratory and vaccination room.	Materials	
4	New Non chlornicated blood bags & gloves	Mr. Sachin Patidhar	Blood bags yet not aviable in market - To be explored
5	Needle destroyer -Syringes to be mutilated or needles to be cut and stored in tamper proof leak proof white transparent containers	Nusing / HK / Dr. Ranukhan / Dr. Priti	The new box is finalized. Nurses & other paramedical staff to be trained for the same.
6	Medicine Trolleys with needle destroyers -  To finalize on the number of trolleys required in ICU's  Existing all medicine trolleys to be modified.  Additonal trolley to be purchased	Nursing  Engineering  Materials	
7	Provide training to all its health care workers, and other involved in handling of bio medical waste at the time of induction and thereafter at least once every year and the details of the training programme conducted, number of personnel trained and number of personnel not undergon any training shall be provided in Annual Report	HR /Nusing / HK / Dr. Ranukhan / Dr. Priti	Nursing , HK & other paramedical staff to be trained for the same.

8	Immunise all health care workers involved in handling of bio medical waste	Dr. Sardana/ Rohit Kapoor/ Dr. Priti	
9	Establish a Bar Code system for bags or containers containing bio medical waste to be sent out of the premises or place for any purpose within a year from the date of notification of these rules	Sachin Patidhar/ Sarla Kachroo	Outside agency is called. Likely to be implemented by 1st week of June 2017
10	Conduct health check up at the time of induction and at least once in a year for all its healthcare workers and others involved in handling of bio- medical waste and maintain the records for the same	HR	
11	Maintain and update on day to day basis the bio medical waste management register and display monthly record on its website according to the bio - medical waste generated in terms of category and colour coding as specified in Schedule I Make available the annual report on its website and all the health care facilities	Vishal Gupta / Sarla Kachroo	All data is being maintained and recorded. Website link to be completed by October 2017. - still pending
12	Phase out use of chlorinated plastic bags, gloves and blood bags within 2 years from the date of notification of these rules	Sachin Patidhar/ Sarla Kachroo	Implemented
13	The label (Part B) on waste bag has to be complied with the new rules of 2016	Sarla Kachroo	Implemented
14	Chemical treatment using at least 10% sodium hypochlorite having 30% residual chlorine for twenty minutes or any other equivalent chemical reagent that should demonstrate Log <sub>10</sub> 4 reduction efficiency for microorganisms as given in Schedule III	Dr. Leena	
15	Use of cardboard boxes instead of blue plastic bags for glass ware items	Materials / Engineering	Sample finalized by materials, Trolley modification in process