



Biocare Research (India) Pvt. Ltd.

CIN : U73100GJ2001PTC39201

Accreditation : AN ISO 9001 : 2008 Laboratory
AN ISO/IEC 17025 : 2005 NABL
(Industrial Testing Laboratory)

Recognised by : Gujarat University, Ahmedabad.

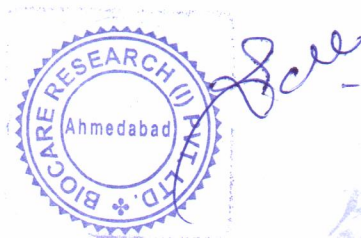


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Corporate Office :- Biocare Research (I) Pvt. Ltd., 1st Floor, Kanth Complex, Nr. Mahavir Jain Vidyalaya, Paldi Cross Road, Ahmedabad-380 007.
Telefax : (079) 26577901, 26577903. **Email :** info@biocareindia.com **Website :** www.biocareindia.com

Study Details

- Trial Date : 03/04/2018 at 5pm.
- Trial Venue : GCS Medical College, Hospital and Research Center, OPP BRM Office, Near Chamunda Bridge, Naroda Road, Ahmedabad.
- Study Site : GCS Medical College, Hospital and Research Center, OPP BRM Office, Near Chamunda Bridge, Naroda Road, Ahmedabad.Gujarat, India
- Trial method : Use of Automated airborne disinfection device SATEJ01 and HUWSAN TR25 Disinfectant
- Trial purpose : To study disinfection efficacy of Automated airborne disinfection device **Satej 01 with HUWASAN TR25** in operation theatre environment for air and surface disinfection.
- OT Details : OT 1 , Major OT Complex, General Surgery OT
- Equipment Used : **SATEJ 01**
AUTOMATED AIR BORNE DISINFECTANT MACHINE
Nebulizes H₂O₂ + silver solution in vapor form
Make: Radiant Enterprise, India.
- Fogging Disinfectant Used : HUWASAN TR – 25, Product of ROAM CHEMIE, BELGIUM
Diluted solution of 5% H₂O₂ and silver.
- Total 800ML solution = 140ml HUWASAN TR-25 solution + 660ml of DM water
- Solution consumed per 1000cuft : 200ml / 1000cuft.
- Solution consumed per M3 : 7ml /M3
- Disinfection Treatment room size in CUFT : 4000 cuft (area size 400 sq ft x 10ft height)





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Disinfection : 114 M3 (Area size 38M2 x 3 Meter Height)
Treatment room
size in M3

Satej 01 duration : 24 minutes
of operation

Observations : Operation theatre was pre cleaned and mopped with hospital approved cleaning agents and disinfectants before the airborne disinfection trial was conducted.

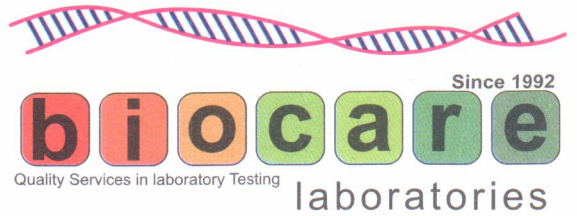
1. AIR SAMPLING AND SWABBING WAS CARRIED OUT BEFORE TREATMENT STARTED.
2. AIR SAMPLING WAS CARRIED OUT BY SETTLE PLATE METHOD
3. SPECIFIED MEDIA PLATES PLACE IN CENTER OF THE AREA FOR 15 MINUTES. PUT THE LID TO PLATES AND SEND TO LABORATORY FOR FURTHER TESTING.
4. SWAB SAMPLES WERE COLLECTED FROM VARIOUS SURFACES IN 5X5 cm² AREAS.
5. TAKE STERILIZED SWABS AND DIP IN NON NUTRITIVE MEDIA.
6. STREAK THE SWAB IN CLOSE PARALLEL AND PERPENDICULAR SWEEPS OVER DEFINED SAMPLING AREA.
7. IN LABORATORY,VORTEX THE SWAB AND MAKE SERIAL DILUTION.
8. INOCULATE DIFFERENT MEDIA ACCORDING TO TESTS.
9. NO MEDICAL OR ELECTRONIC EQUIPMENT WAS REQUIRED TO COVER DURING THE TREATMENT.
10. SATEJ 01: AN AUTOMATED AIRBORNE DISINFECTION GENERATOR OF H₂O₂ VAPOR KEPT IN ONE FIXED LOCATION ENSURED UNIFORM SPREAD OF DRY VAPOR OG HUWASAN TR 25 ACROSS THE SPACE 4000 CUFT/114M3.
11. 06 H₂O₂ DETECTION STRIPS PLACED IN VARIOUS CORNERS, DIFFICULT TO ACCESS AREAS OF OT CHANGED ITS COLOR POST DISINFECTION TREATMENT CERTIFYING UNIFORM SPREAD OF H₂O₂ VAPOR ACROSS THE SPACE AND





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SURFACES.

12. DISINFECTANT CONSUMED 7ML/M3 OR 200ML/1000CUFT COMPLIES TO INTERNATIONAL NORMS FOR AIRBORNE DISINFECTION DEVICES AND PROCESS.
13. AT END OF SATEJ 01 OPERATION, OT WAS SEALED AND CLOSED FOR 01 HOUR.

AT THE END OF PROCEDURE NO WETNESS OF ON FLOOR, WALLS, MEDICAL EQUIPMENTS, OT LIGHTS, ELECTRONIC EQUIPMENT WAS OBSERVED.

14. AIR SAMPLING AND SWABBING WAS CARRIED OUT 1 hour After Treatment was carried out.
AIR SAMPLING WAS CARRIED OUT BY SETTLE PLATE METHOD
SWAB SAMPLES WERE COLLECTED FROM VARIOUS SURFACES IN 5X5 cm² AREA
15. SAMPLING WAS DONE AS PER OBSERVATION 2-8.

Conclusions :

THE STUDY SHOWS FOLLOWING OUTCOMES.

1. The pre and post culture results show that there was decrease in microbial load.
2. The combination of Automated airborne disinfection device SATEJ 01 and HUWASAN TR25 were useful reducing microbial load on surfaces and air very effectively , when used after pre cleaning and mopping of surfaces.
3. Such method offers many additional benefits and safety which can not be achieved alone by manual mopping and wiping.





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TEST REPORT

Test Description : Air Microbial Monitoring
Method : Settled plate
Test site : GCS Medical College, Hospital and Research Center,
OPP BRM Office, Near Chamunda Bridge, Naroda Road,
Ahmedabad.
Test area : **OT 1** (Pre Fumigation)
Ref. No. : Ind/18-19/003EA
Date of Testing : 03/04/2018
Date of Report : 09/04/2018
Report status : Final
Result :

S. No.	Test Parameter	Result Obtained CFU/ cm ³ /Plate	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	02 cfu	<01 cfu
02	Yeast & Mould Count	<01 cfu	<01 cfu
03	<i>E.coli</i>	<01 cfu	<01 cfu
04	<i>Pseudomonas spp.</i>	<01 cfu	<01 cfu
05	<i>S.aureus</i> (Coag. +Ve)	<01 cfu	<01 cfu
06	<i>Staphylococcus spp.</i> (Coag. -Ve)	01 cfu	<01 cfu
07	<i>Bacillus spp.</i>	01 cfu	<01 cfu

Remarks:




(Dr. Dilip Zaveri)
Consultant Clinical Microbiologist



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TEST REPORT

Test Description : Surface Hygiene Monitoring
Method : Swab from surface
Test site : GCS Medical College, Hospital and Research Center,
OPP BRM Office, Near Chamunda Bridge, Naroda Road,
Ahmedabad.
Swab Collection area : **OT 1** (Pre Fumigation)
Swab Collection site : PATIENT'S TABLE
Size of sampling : 5 X 5 cm
Ref. No. : Ind/18-19/003EB1
Date of Testing : 03/04/2018
Date of Report : 09/04/2018
Report status : Final
Result :

S. No.	Test Parameter	Result Obtained CFU/ cm ³ /Swab	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	<01 cfu	<01 cfu
02	Yeast & Mould Count	<01 cfu	<01 cfu
03	<i>E.coli</i>	<01 cfu	<01 cfu
04	<i>Pseudomonas spp.</i>	<01 cfu	<01 cfu
05	<i>S.aureus</i> (Coag. +Ve)	<01 cfu	<01 cfu
06	<i>Staphylococcus spp.</i> (Coag. -Ve)	<01 cfu	<01 cfu
07	<i>Bacillus spp.</i>	<01 cfu	<01 cfu

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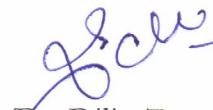
TEST REPORT

Test Description : Surface Hygiene Monitoring
Method : Swab from surface
Test site : GCS Medical College, Hospital and Research Center,
OPP BRM Office, Near Chamunda Bridge, Naroda Road,
Ahmedabad.
Swab Collection area : **OT 1** (Pre Fumigation)
Swab Collection site : OT LIGHTS
Size of sampling : 5 X 5 cm
Ref. No. : Ind/18-19/003EB2
Date of Testing : 03/04/2018
Date of Report : 09/04/2018
Report status : Final
Result :

S. No.	Test Parameter	Result Obtained CFU/ cm ³ /Swab	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	<01 cfu	<01 cfu
02	Yeast & Mould Count	<01 cfu	<01 cfu
03	<i>E.coli</i>	<01 cfu	<01 cfu
04	<i>Pseudomonas spp.</i>	<01 cfu	<01 cfu
05	<i>S.aureus</i> (Coag. +Ve)	<01 cfu	<01 cfu
06	<i>Staphylococcus spp.</i> (Coag. -Ve)	<01 cfu	<01 cfu
07	<i>Bacillus spp.</i>	<01 cfu	<01 cfu

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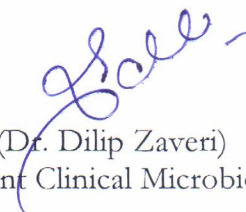
TEST REPORT

Test Description : Surface Hygiene Monitoring
Method : Swab from surface
Test site : GCS Medical College, Hospital and Research Center,
OPP BRM Office, Near Chamunda Bridge, Naroda Road,
Ahmedabad.
Swab Collection area : OT 1 (Pre Fumigation)
Swab Collection site : SUCTION
Size of sampling : 5 X 5 cm
Ref. No. : Ind/18-19/003EB3
Date of Testing : 03/04/2018
Date of Report : 09/04/2018
Report status : Final
Result :

S. No.	Test Parameter	Result Obtained CFU/ cm ³ /Swab	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	<01 cfu	<01 cfu
02	Yeast & Mould Count	<01 cfu	<01 cfu
03	<i>E.coli</i>	<01 cfu	<01 cfu
04	<i>Pseudomonas spp.</i>	<01 cfu	<01 cfu
05	<i>S.aureus</i> (Coag. +Ve)	<01 cfu	<01 cfu
06	<i>Staphylococcus spp.</i> (Coag. -Ve)	<01 cfu	<01 cfu
07	<i>Bacillus spp.</i>	<01 cfu	<01 cfu

Remarks:




(Dr. Dilip Zaveri)
Consultant Clinical Microbiologist



TEST REPORT

Test Description : Surface Hygiene Monitoring
Method : Swab from surface
Test site : GCS Medical College, Hospital and Research Center,
OPP BRM Office, Near Chamunda Bridge, Naroda Road,
Ahmedabad.
Swab Collection area : OT 1 (Pre Fumigation)
Swab Collection site : INSTRUMENT TROLLEY
Size of sampling : 5 X 5 cm
Ref. No. : Ind/18-19/003EB4
Date of Testing : 03/04/2018
Date of Report : 09/04/2018
Report status : Final
Result :

S. No.	Test Parameter	Result Obtained CFU/ cm ³ /Swab	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	<01 cfu	<01 cfu
02	Yeast & Mould Count	<01 cfu	<01 cfu
03	<i>E.coli</i> & <i>Klebsiella</i>	<01 cfu	<01 cfu
04	<i>Pseudomonas spp.</i>	<01 cfu	<01 cfu
05	<i>S.aureus</i> (Coag. +Ve)	<01 cfu	<01 cfu
06	<i>Staphylococcus spp.</i> (Coag. -Ve)	<01 cfu	<01 cfu
07	<i>Bacillus spp.</i>	<01 cfu	<01 cfu

*TNTC=To numerous to count

Remarks:



(Dr. Dilip Zaveri)
Consultant Clinical Microbiologist



TEST REPORT

Test Description : Surface Hygiene Monitoring
Method : Swab from surface
Test site : GCS Medical College, Hospital and Research Center,
OPP BRM Office, Near Chamunda Bridge, Naroda Road,
Ahmedabad.
Swab Collection area : OT 1 (Pre Fumigation)
Swab Collection site : FLOOR
Size of sampling : 5 X 5 cm
Ref. No. : Ind/18-19/003EB5
Date of Testing : 03/04/2018
Date of Report : 09/04/2018
Report status : Final
Result :

S. No.	Test Parameter	Result Obtained CFU/ cm ³ /Swab	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	01 cfu	<01 cfu
02	Yeast & Mould Count	01 cfu	<01 cfu
03	<i>E.coli</i>	<01 cfu	<01 cfu
04	<i>Pseudomonas spp.</i>	<01 cfu	<01 cfu
05	<i>S.aureus</i> (Coag. +Ve)	<01 cfu	<01 cfu
06	<i>Staphylococcus spp.</i> (Coag. -Ve)	<01 cfu	<01 cfu
07	<i>Bacillus spp.</i>	<01 cfu	<01 cfu

Remarks:



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Consultant Clinical Microbiologist