



Biocare Research (India) Pvt. Ltd.

CIN : U73100GJ2001PTC39201

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

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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

Airborne disinfection efficacy study of SATEJ 01 nebulizing H<sub>2</sub>O<sub>2</sub>+ silver solution in vapor form

- Trial Date : 16/06/2018 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 Airborne disinfection device SATEJ 01 and VIROSIL PHARMA Disinfectant
- Trial purpose : To study disinfection efficacy of airborne disinfection device **SATEJ 01 with VIROSIL PHARMA** in operation theatre environment for air and surface disinfection.
- OT Details : OT 04 , Major OT Complex, Gynecology Surgery OT
- Equipment Used : **SATEJ 01**  
AUTOMATED AIR BORNE DISINFECTANT MACHINE  
Nebulizes H<sub>2</sub>O<sub>2</sub> + silver solution in vapor form  
Make: Radiant Enterprise, India.
- Fogging Disinfectant Used : **VIROSIL PHARMA**, Product of Sanosil Biotech Pvt. Ltd, India  
Diluted solution of 5% H<sub>2</sub>O<sub>2</sub> and silver.

Total 800ML solution = 400ml VIROSIL PHARMA solution + 400ml of DM water

Solution consumed per 1000cuft : 200ml / 1000cuft.

Solution consumed per M<sup>3</sup> : 7ml /M<sup>3</sup>





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Disinfection : 4000 cuft ( area size 400 sq ft x 10ft height)  
Treatment room  
size in CUFT

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

Aerojet duration : 27 minutes  
of operation

Airborne disinfection trial was conducted without manual disinfection of surfaces

- Observations :
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 cm<sup>2</sup> 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 AIRBORNE DISINFECTION GENERATOR OF H<sub>2</sub>O<sub>2</sub> AEROSOL FOG KEPT IN ONE FIXED LOCATION ENSURED UNIFORM SPREAD OF DRY VAPOR OF VIROSIL PHARMA ACROSS THE SPACE 4000 CUFT/114M3.

*gce*



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11. 06 NOS H<sub>2</sub>O<sub>2</sub> DETECTION STRIPS PLACED IN VARIOUS CORNERS, DIFFICULT TO ACCESS AREAS OT CHANGED ITS COLOR POST DISINFECTION TREATMENT CERTIFYING UNIFORM SPREAD OF H<sub>2</sub>O<sub>2</sub> VAPOR ACROSS THE SPACE AND 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.
14. AT THE END OF PROCEDURE NO WETNESS OF ON FLOOR, WALLS, MEDICAL EQUIPMENTS, OT LIGHTS, ELECTRONIC EQUIPMENT WAS OBSERVED.
15. 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 cm<sup>2</sup> AREA
16. 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 airborne disinfection device SATEJ 01 and VIROSIL PHARMA 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 cannot be achieved alone by manual mopping and wiping.

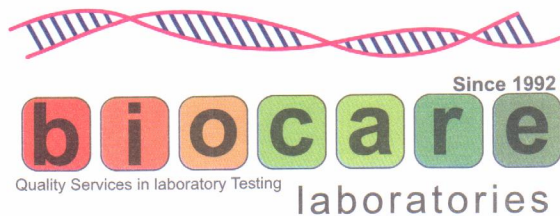




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## TEST REPORT

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 4  
Ref. No. : Ind/18-19/0107D-A  
Date of Testing : 16/06/2018  
Date of Report : 23/06/2018  
Report status : Final  
Result :

S. No.	Test Parameter	Result Obtained CFU/ cm <sup>3</sup> /Plate	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	54 cfu	08 cfu
02	Yeast & Mould Count	02 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)	45 cfu	<01 cfu
07	<i>Bacillus spp.</i>	07 cfu	<01 cfu

Remarks:



  
(Dr. Dilip Zaveri)  
Consultant Clinical Microbiologist



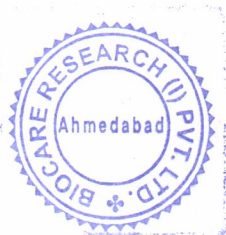
## TEST REPORT

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 4  
Swab Collection site : FLOOR-1  
Size of sampling : 5 X 5 cm  
Ref. No. : Ind/18-19/0107D-B1  
Date of Testing : 16/06/2018  
Date of Report : 23/06/2018  
Report status : Final

**Result :**

S. No.	Test Parameter	Result Obtained CFU/ cm <sup>3</sup> /Swab	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	03 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>	02 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 4  
Swab Collection site : FLOOR-2  
Size of sampling : 5 X 5 cm  
Ref. No. : Ind/18-19/0107D-B2  
Date of Testing : 16/06/2018  
Date of Report : 23/06/2018  
Report status : Final

**Result :**

S. No.	Test Parameter	Result Obtained CFU/ cm <sup>3</sup> /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 4  
Swab Collection site : OT TABLE-1  
Size of sampling : 5 X 5 cm  
Ref. No. : Ind/18-19/0107D-B3  
Date of Testing : 16/06/2018  
Date of Report : 23/06/2018  
Report status : Final

**Result :**

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

**Remarks:**



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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 4  
Swab Collection site : OT TABLE-2  
Size of sampling : 5 X 5 cm  
Ref. No. : Ind/18-19/0107D-B4  
Date of Testing : 16/06/2018  
Date of Report : 23/06/2018  
Report status : Final

Result :

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

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 4  
Swab Collection site : INSTRUMENT TROLLY  
Size of sampling : 5 X 5 cm  
Ref. No. : Ind/18-19/0107D-B5  
Date of Testing : 16/06/2018  
Date of Report : 23/06/2018  
Report status : Final

**Result :**

S. No.	Test Parameter	Result Obtained CFU/ cm <sup>3</sup> /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 (Coag. +Ve)</i>	<01 cfu	<01 cfu
06	<i>Staphylococcus spp. (Coag. -Ve)</i>	<01 cfu	<01 cfu
07	<i>Bacillus spp.</i>	<01 cfu	<01 cfu

**Remarks:**



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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 4**  
Swab Collection site : ANESTHETIST TROLLY  
Size of sampling : 5 X 5 cm  
Ref. No. : Ind/18-19/0107D-B6  
Date of Testing : 16/06/2018  
Date of Report : 23/06/2018  
Report status : Final

**Result :**

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

**Remarks:**



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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 4**  
Swab Collection site : SUCTION  
Size of sampling : 5 X 5 cm  
Ref. No. : Ind/18-19/0107D-B7  
Date of Testing : 16/06/2018  
Date of Report : 23/06/2018  
Report status : Final  
**Result :**

S. No.	Test Parameter	Result Obtained CFU/ cm <sup>3</sup> /Swab	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	<b>325 cfu</b>	<01cfu
02	Yeast & Mould Count	<01cfu	<01cfu
03	<i>E.coli</i>	<b>80 cfu</b>	<01cfu
04	<i>Pseudomonas spp.</i>	110 cfu	<01cfu
05	<i>S.aureus</i> (Coag. +Ve)	<01cfu	<01cfu
06	<i>Staphylococcus spp.</i> (Coag. -Ve)	<01cfu	<01cfu
07	<i>Bacillus spp.</i>	<b>112 cfu</b>	<01cfu

Remarks:



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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 4**  
Swab Collection site : WALL-1  
Size of sampling : 5 X 5 cm  
Ref. No. : Ind/18-19/0107D-B8  
Date of Testing : 16/06/2018  
Date of Report : 23/06/2018  
Report status : Final  
**Result :**

S. No.	Test Parameter	Result Obtained CFU/ cm <sup>3</sup> /Swab	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	<b>01 cfu</b>	<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>	<b>01 cfu</b>	<01 cfu

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Method : Swab from surface  
Test site : GCS Medical College, Hospital and Research Center,  
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Ahmedabad.

Swab Collection area : **OT 4**  
Swab Collection site : WALL-2  
Size of sampling : 5 X 5 cm  
Ref. No. : Ind/18-19/0107D-B9  
Date of Testing : 16/06/2018  
Date of Report : 23/06/2018  
Report status : Final

**Result :**

S. No.	Test Parameter	Result Obtained CFU/ cm <sup>3</sup> /Swab	
		Pre Fumigation Count	Post Fumigation Count
01	Aerobic Microbial Count	<b>01 cfu</b>	<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>	<b>01 cfu</b>	<01 cfu

**Remarks:**



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