



## Haffkine Institute For Training, Research & Testing

(Registered under Societies Registration Act, 1860)

HI/BY-R/3057

23 MAR 2009

To:

M/s. SANOSIL BIOTECH PVT. LTD.  
Warden House, Sir P. M. Road  
Fort  
Mumbai - 400 001

**Subject :** *In vitro* anti-microbial efficacy (anti-sporocidal & anti-fungal) testing of one disinfectant solution sample labelled as "VIROSIL".

**Reference:** Your letter dated 04.03.2009.

Dear Sir,

Report on *In vitro* anti-microbial efficacy (anti-sporocidal & anti-fungal) testing of the above mentioned one disinfectant solution sample, submitted by you to this institute vide your letter dated 04.03.2009, is enclosed along with.

Dr. Abhay Chowdhary  
Director.



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**Report on *In vitro* anti-microbial activity of one disinfectant solution sample "VIROSIL", submitted by M/s. SANOSIL BIOTECH PVT. LTD, Mumbai - 400 001, vide their letter dated 04.03.09.**

**Sample :** Sample labelled as: Disinfectant - Brand Name : "VIROSIL"  
Contents: Hydrogen Peroxide - 13% w/v. Silver nitrate solution - 0.01%. Batch No.: BO90362. Mfg. dt.: Mar. 2009. Exp. Dt.: Feb. 2010.

**Test procedure :** The 5-ml aliquots of 10% and 20% concentrated form (dilution were done in sterile distilled water) of disinfectant "VIROSIL", were placed separately in sterile test tubes. 0.1 ml of bacterial spores suspension containing approximately  $10^8$  cells, was suspended individually in these tubes, mixed thoroughly, and kept at room temperature. After different intervals of time, a loopful of suspension from each tube was inoculated in individual tubes containing approximately 8 ml sterile nutrient broth. These tubes were incubated at 37 °C. After 48 hours, the tubes were checked for growth or inhibition, if any. This procedure was applied for the fungal species viz. *Aspergillus niger* (by using its conidial suspension i.e. 0.1 ml (having  $10^8$  conidia) in 5 ml. aliquot of 10% and 20% concentrated disinfectant solution-"VIROSIL" and *Candida albicans* (broth culture) by using Sabouraud's broth as the nutrient medium and nutrient medium tubes were incubated at 28 °C temperature for 72 hours. For each concentration of the disinfectant solution "VIROSIL" the experiments performed separately against all the microbial species employed in the test.

## Results:

Sr. No.	Test organism	Concentration of "VIROSIL"	Viability / inactivation* of the organism by the disinfectant "VIROSIL" after a contact for (contact time in minutes)							
			15	30	60	90	120	150	180	210
1)	Spores of <i>Bacillus subtilis</i> (ATCC-9372)	10%	v	v	v	v	v	v	v	v
		20%	v	v	v	v	n	n	n	n
2)	<i>Candida albicans</i> (ATCC 10231)	10%	n	n	n	n	n	n	n	n
		20%	n	n	n	n	n	n	n	n
3)	<i>Aspergillus niger</i> conidia suspension	10%	v	v	v	v	n	n	n	n
		20%	v	v	n	n	n	n	n	n

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\* 'n' = not viable, i.e., the bacterial / fungal species was killed / inactivated.

'v' = viable, i.e., the fungal species was survived.

**Remarks:** The disinfectant solution sample "VIROSIL", in 20% concentrated form kills / inactivates the spores of *Bacillus subtilis* (ATCC 9372) after a killing / inactivation contact time of one twenty (120) minutes. Whereas it kills / inactivates the fungal (yeast) species *Candida albicans* (ATCC 10231) at 10% concentration after a killing / inactivation contact time of fifteen (15) minutes and it kills / inactivates the conidia of fungal species (mold) *Aspergillus niger* (ATCC 16404) at 10% concentration, after a killing / inactivation contact time of one twenty (120) minutes.

**N.B.:** This report is issued with an explicit understanding that it would neither be used for the purpose of advertisement nor it would be produced as an evidence in any form without the prior permission of the undersigned. Further, this report is restricted to the sample submitted to the department only.

  
Dr. Abhay Chowdhary  
Director.