

FORMAL STUDY

STUDY TITLE

Medevac Helicopter Decontamination via Spinning Disc Technology

TEST SPECIMEN(S)

Medevac Helicopter
Provided By: L.A. County Fire Department

AUTHOR

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STUDY COMPLETION DATE

January 8, 2015

EXPERIMENT SITE

L.A. County Fire Department
Barton Helipad, USAR office
12605 Osborne St., Pacoima

PERFORMING LABORATORY

SixLog Laboratory
12201 Pangborn Avenue
Downey CA 90241-5612

STUDY REPORT**TEST SUBSTANCE IDENTITY**

Medevac Helicopter: Cabin and Cockpit

STUDY DATES:

Study Initiation Date: January 8, 2015

Experimental Start Date: January 8, 2015

Experimental End Date: January 8, 2015

Study Completion Date: January 15, 2015

Device Name: Sixlog Phileas 20I

Chemical Name: Minncare Cold Sterilant

Chemical Dilution: Diluted 10:1 with water

Test Space Volume: 450 ft³

Exposure Temperature: Temperature (73° F)

Biological Indicator: 6 log Mesa Lab Biological Indicator:
Organism: *G. Stearothermophilus*

EXPERIMENTAL DESIGN

The L.A. County Fire Department provided a medevac helicopter for the Phileas 20I decontamination experiment. SixLog employees prepared the helicopter for the experiment by placing biological indicators in various locations throughout the interior of the helicopter. The Phileas 20I was placed in the center of the helicopter and programmed to the predetermined run time. The interior of the helicopter was then exposed to a hydrogen peroxide based dry fog solution for a specified exposure time. Biological indicators in the helicopter were removed. BI's were incubated for 7 days. Appropriate specimen purity, test space sterility, and exposure controls were used.

EXPERIMENT DESCRIPTION

L.A. County Fire Department helicopter was exposed to one cycle of a hydrogen peroxide based dry fog. Five biological indicators (BI's) were placed throughout the interior of the helicopter. Chemical indicators were placed with each BI. After undergoing three phases of decontamination (gas, dwell, and aeration), BI's were removed and incubated for 7 days. Results of the experiment can be found in Appendix A, B, & C.

RESULTS

For all data collected during the experiment refer to tables and photographs in Appendices A, B, & C.

All five BI's showed no signs of growth. The experiment resulted in a successful decontamination of the medevac helicopter cabin and cockpit.

Appendix A: Tables and BI Placement

EXPERIMENT RUN PARAMATERS

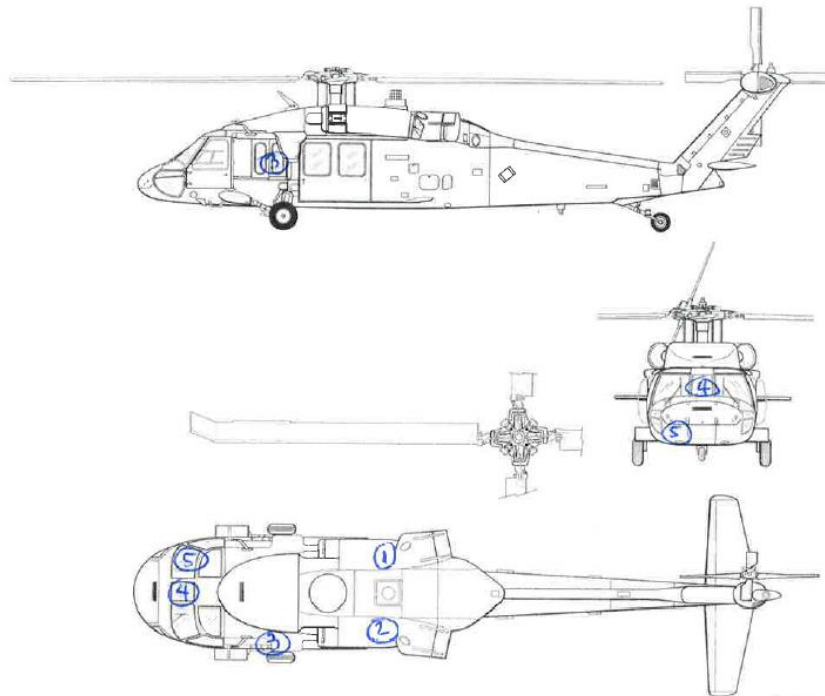
Experiment	Gas (min)	Dwell (min)	Aeration (min)	CI (color)
1	19	20	30	Purple/brown

Description: 225 ml dose, rate=12ml/min

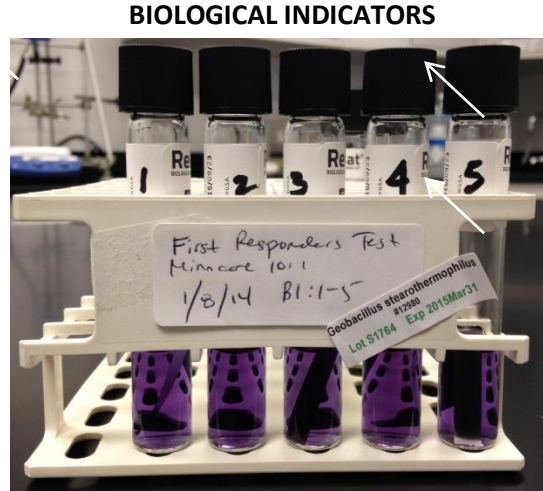
Biological Indicator Results (7 days)

BI #	BI Location	BI (+ or -)	CI (color change)
1	Back wall of cabin	-	+
2	Back wall of cabin	-	+
3	Side Window	-	+
4	Front Windshield	-	+
5	Floor below passenger seat in cockpit	-	+
Control (+)		+	
Control (-)		-	

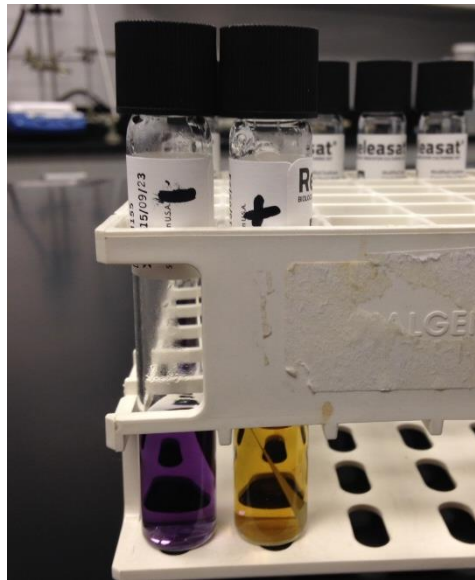
BI PLACEMENT



APPENDIX B: Lab Photographs



Biological Indicators: 1-5



Biological Indicators: (+ (yellow) and – (purple) controls)

Final results of the BI's have been analyzed, after a full 7 days of incubation. Growth is determined by the presence of a yellowish-brown color in the TSB. Based on our analysis, none of the biological indicators have shown any sign of growth which confirms that a complete SixLog reduction 10^{-6} has been achieved within the listed, target area(s).

APPENDIX C: Photographs



Medevac Helicopter



Biological Indicator and Chemical Indicator



Phileas 201 placed in the cabin area



Phileas 20I actively decontaminating the cabin and cockpit area