

The following PDF is a report on the results of tests conducted by the Chief Public Health Officer of the South African Government mine hygiene inspectors. In 2013 the South African Government passed legislation that imposed strict hygiene standards in all South African mines. From the date of implementation, government inspectors have had the power to close mines should those strict standards not be met. A mine shaft closure can cost around \$1.5m per day. The government inspectors use independent laboratories to take and then process the swabs using standard culture techniques. Swabs are taken from many areas of the mine including the change houses, where as many as 1,000 men will shower before each shift and after each shift. There are 3 shifts per day. As you can imagine the potential for bacteria, viruses and fungi to grow and spread is enormous.

At Q Technologies, we were called in to help the largest contract cleaning company of mines in South Africa to help them resolve some of the major challenges they faced with the changes in legislation, to help them achieve the strict hygiene standards imposed by the government. We now have a significant amount of their data showing the effectiveness of Q shield Bio fogging which was originally devised for use in Operating theatres and is now used throughout mining in South Africa. Anglo American mining company is the world's largest precious metals mining company. In South Africa they have more than 1 million men underground every day, 7 days a week. The hygiene standards achieved by Q Shield bio fog have led to the **Chief Public Health Officers report** on standards achieved at one of their sites using **Q shield Bio Fog**. On the next pages you can see his conclusion is **“The tested Q Shield disinfectant has proven to be effective and has a long lasting effect in removing/ reducing microorganisms on surfaces”**.

Repeated tests have shown that once Q shield bio fog has been used in these high impact areas, only fresh water and detergents are required, no disinfectants are required to maintain the highest standards of hygiene.

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MICROBIOLOGICAL SWABS REPORT HTS

PH/CH/MM - 04/15

REVISION 1.0

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2015 -05- 09

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HTS SWABS ANALYSIS REPORT: APRIL 2015

INTRODUCTION

Surface sampling allows us to determine the efficacy of a cleaning program and the effectiveness the disinfectants or cleaning chemicals used to kill or remove the micro-organisms. All the samples were taken after the cleaning process, to determine the efficacy of the cleaning and disinfection process.

Public Health group Procedure: Surface Sampling for Microbiological Contamination (Surface Swabs) - CTR-SHE-HLH-PRO-0003, standard is used to interpret the results which is <1000cfu/cm² (no more than 1000 bacteria / cm²)

RESULTS

On the 15 April 2015 surface samples (Swabs) were taken at the HTS centre, all the samples were taken after the cleaning process (post cleaning). New Q-shield disinfectant was put to test, the chamber and the change houses were fogged on the 14 April 2015, thereafter normal cleaning was done with household detergent up to the day of sampling

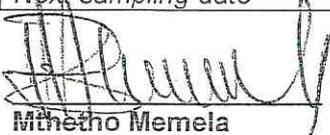
The results as shown in the graphs below, illustrate that all the samples taken at the change house and at the chamber were complying after the cleaning process. The results suggest that cleaning and disinfection process was effective in removing the micro-organisms.

CONCLUSION

The tested Q Shield disinfectant has proven to be effective and has a long lasting effect in removing / reducing microorganisms on surfaces.

Compiled by:

<i>Date of report</i>	06 May 2015
<i>Date of Sampling</i>	15 April 2015
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<i>HPCSA (Health Profession Council Of South Africa) Registration No.</i>	HI 0058602
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<i>Next sampling date</i>	May 2015


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HTS MICROBIOLOGICAL SWABS ANALYSIS: APRIL 2015

