Lonmin mine in South Africa is one of the largest platinum mines in the world. The following PDF are the lab reports from the change houses at this mine 52 days after bio fogging. Most of the mine workers come from countries bordering South Africa. There is a significant amount of data showing that almost 40% of them are HIV positive and another 30% have TB. They bring with them, and take home many infectious diseases from fungal foot infections to TB and HIV. It is easy to see how much of a problem this became over many years. 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. The hygiene standards achieved by Q Shield bio fog have led to the Chief Public Health Officers report on the next pages. 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, o disinfectants are required to maintain the highest standards of hygiene.

PLEASE SCROLL DOWN FOR FULL TEST RESULTS & REPORT

WhirlAway Trading 175cc

QualitySure
Laboratory and Consulting Services

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## Report Information Page



Certificate No: 2014/07/29-5095-4

Test Codes and Guidelines														
Test Code	Unit	Test Description	Test Method	Catagory	Test Date	Test Batch#	Standard Food Handling ByLaws	Governmen t Notice No 692	Pick 'n Pay Guidelines					
SWAB	cfu/cm2	Total Heterothrophic Plate count Swab	SABS	Control	2014/07/29	7671								
SWABTC	cfu/ml	Swab Total Coliform	3MPetrifilm	Equipment/Surface Swabs	2014/07/29	7672	NA	NA	10					
Test Code	Unit	Test Description	Test Method	Catagory	Test Date	Test Batch#	Standard Food Handling ByLaws	Governmen t Notice No 692	Pick 'n Pay Guidelines					
	Test Codes and Guidelines													

04 August 2014

## WhirlAway Trading 175cc

Camperdown t/a Jonet 1000 cc

014 592 7603

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## Analysis Report



 Date:
 2014/08/01

 Attention:
 John Flowers

 te Received:
 2014/07/29

Fax No:	086 527	086 527 2296 OrderNo:													Date Received:									2014/07/29													
Email:	Email: jflowers@camprtb.co.za															San	npler:			S. Ve	rmaak	(		La							Lab	No:	2014/07/29-5095-4				
		Test Code		рН	REZ	METHB	СГОТ	ETHANO	DELVO	PHOS	FAT	SNF	PRO	Н2О	SCC	BRUC:	BRIX:	SWABECOLI:	SWABTC:	SWAB:	WABSTAPH:	SWABLIS:	MECOLI:	MTC:	SPLATE:	AIRPLATE:	BASSILUS	CAMP	CLOS:	LEGIO	LISTERIA:	PSEUDO:	SALMO:	SHIGELLA:	SRB:	STAPH:	M
Unit Sample			0-6 units	Hours	Pos/Neg	Pos/Neg	Pos/Neg	units	%		%	%	x1000	Pos/Neg	o	cfu/cm2	cfu/cm2	cfu/cm2	cfu/cm2	cfu/cm2	cfu/ml or g	cfu/ml or g	cfu/ml or g	cfu/cm2	cfu/g	cfu/g	cfu/g	cfu/ml	cfu/g	cfu/g	cfu/g	cfu/g	Pos/Neg	cfu/g	cfu/g		
Lonmin - S Sample Date:	affy # S-Sh 28/07/2014 2014/	1	5095-1																0																		
Lonmin - Saffy # T-Table Surface 28/7/2014 Sample Date: 2014/07/29		1																0																			
Control M899 50 05 05 05 05 05 05 05 05 05 05 05 05																		0																			
Ina Sample Date:	activator M 2014/		5095-4																	0																	

Authorised by:

BIOCHEMIST: B.A Pretorius

All Results have been reviewed and authorised by a technical signatory. Samples were collected by the customer. Samples are handled, preserved and analysed according to laboratory procedure unless otherwise stated. Only methods marked with an asterisk are accredited. This Report relates only to the samples tested and may not be reproduced without the written approval of the Laboratory Manager of Laboratory Director. Any alterations to this Report are made in the form of an amended Certificate version. 1. USEPA approved Methods

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Certificate Number: 2014/07/29-5095-4

04 August 2014

Created by: BA Pretorius Date: 29 Junie 2011