

3M Microbiology

**3M™ Clean-Trace™ Hygiene Management Solution**



# Effective Hygiene Management



# The Future of Hospital Hygiene

In recent years, there has been an increased focus on the ability of hospitals and other healthcare settings to demonstrate that they operate to the highest possible standards of hygiene. Being able to show that cleaning regimes are effective plays a pivotal role in this process. Visual assessment of cleanliness has always played an important part, however more recently there has been an increasing need for a more sensitive, quantitative approach.

The 3M™ Clean-Trace™ Hygiene Management Solution represents a cost-effective solution which supports the focus on improved quality of cleanliness and hygiene management in healthcare settings.

The solution helps assess standards of hygiene and the effectiveness of cleaning procedures by measuring the amount of adenosine tri-phosphate (ATP) in a sample. The *Clean-Trace Hygiene Management Solution* indicates overall biological contamination including microbiological and product residues for a fuller picture of the hygienic status of surfaces and equipment.

## Department of Health RRP Level 1 recommendation & the Showcase Hospitals Programme

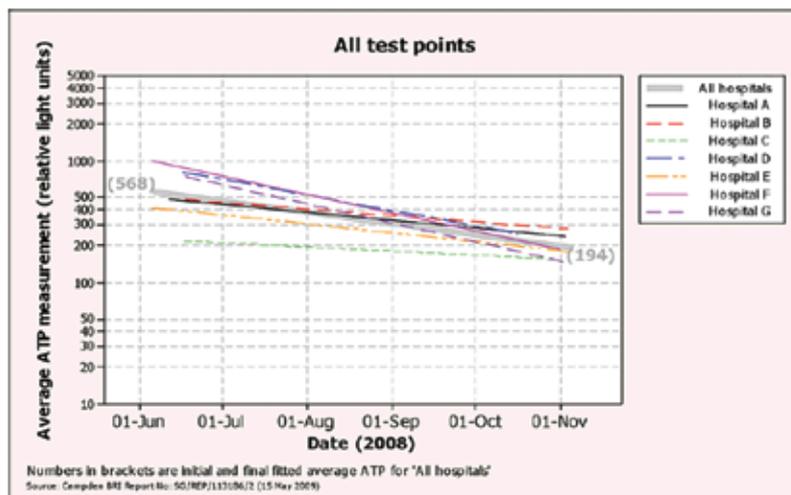
Currently the only ATP system with a Rapid Review Panel (RRP) Level 1 recommendation, the Clean-Trace system has been evaluated by the Department of Health (DH) as part of the Healthcare Associated Infection Technology Innovation Programme's Showcase Hospitals Trial.

### REDUCTIONS IN BIOCONTAMINATION LEVELS WERE OBSERVED<sup>1</sup>

The Clean-Trace system was placed in seven Showcase Hospitals and all hospitals experienced an overall decline in the level of contamination over the evaluation period.

In addition to the reduction in biocontamination levels;

- Hygiene awareness improved
- Its use was popular with staff, patients and visitors
- In some hospitals, a spirit of healthy competition developed helping staff focus on the value of cleanliness
- User ratings were positive and all 31 factors assessed scored over 6 out of 10



Average readings for all test points (log scale)



# 3M™ Clean-Trace™ Hygiene Management Solution

At 3M we continually strive to provide innovative solutions that meet our customers' requirements and it is by listening to feedback from our customers that the Clean-Trace Clinical system has evolved into the *Clean-Trace Hygiene Management Solution*.

The *Clean-Trace Hygiene Management Solution* represents a major step forward, bringing all of the recognised benefits of using ATP hygiene monitoring with the added convenience of automated online trend analysis and report generation and delivery.

The solution offers a comprehensive approach to ATP rapid hygiene monitoring with the flexibility to scale up as hygiene plans evolve.

It includes:

- 3M™ Clean-Trace™ Clinical ATP Swabs
- 3M™ Clean-Trace™ NGi Luminometer & Docking Station
- 3M™ Clean-Trace™ Online Reporting System
- 3M service and support
- 3M technical consultancy



Offering a cost effective solution to monitoring cleanliness of surfaces and the storage, distribution and management of resultant data, the *Clean-Trace Hygiene Management Solution* allows healthcare settings the opportunity for continuous improvement of their hygiene management systems.

*The Clean-Trace Hygiene Management Solution provides hospital-wide control, allowing the:*

- Measurement, monitoring, improvement and control of the hospital cleaning process
- Easy comparison of hygiene performance between different areas in a hospital
- Demonstration with data of the trends in cleaning effectiveness
- Flexibility to scale up the solution across the hospital or Trust
- Easy management of data reporting with automated reports to all stakeholders
- Continual improvement of hygiene standards
- Use of objective data to support compliance to DH hygiene standards
- Improvement of patient experience and hospital image

# 3M™ Clean-Trace™ Hygiene Management Solution

## Easy to use:

- The simplicity of tests reduces variability from user to user ensuring accurate and consistent results
- Minimal training required
- Easy integration into existing daily cleaning checks

## Rapid results:

- Results available in less than 30 seconds
- Allows assessment of the hygienic status of facilities in real time
- Enables immediate corrective actions and proactive cleaning schedules

## Quantitative monitoring:

- Provides quantitative test scores in proportion to the amount of organic matter present on the surface tested
- Enables the identification of potential high-risk areas

## Simple to interpret:

- Results are presented as Relative Light Units (RLU) that directly relate to the degree of contamination on equipment or surfaces



## Reliable and accurate:

- Can be combined with subjective visual assessments to provide a more accurate assessment of hygiene status
- Superior repeatability<sup>2,3</sup> and excellent sensitivity<sup>3</sup>

## Improved cleaning quality assurance:

- Enables potential adjustment of cleaning frequency, chemicals and contact time
- May enable cost savings on cleaning materials and labour requirements
- Provides an excellent training tool – enabling personnel to see a clear and immediate link between good hygiene practice and the hygiene test result



## The NEW 3M™ Clean-Trace™ Online Reporting System:

- Secure capture and storage of hygiene data
- Automated online report generation to help comply with audit requirements
- Minimises administration time of preparing hygiene reports
- Reports provide easy identification of priority areas for targeted testing
- Clear identification of re-test results alongside original results showing remedial actions and demonstrating due diligence
- Flexibility to choose the auto-generated report type, the target audience and frequency of distribution
- Reports emailed to all identified stakeholders at scheduled frequency
- Automated alerts for hygiene non-conformance



## How the 3M™ Clean-Trace™ Hygiene Management Solution works

Gathering hygiene data using the *Clean-Trace Hygiene Management Solution* involves sampling a surface with a 3M™ Clean-Trace™ Clinical ATP Swab, activating the test and placing it into the 3M™ Clean-Trace™ NGi Luminometer for reading. The result is displayed in Relative Light Units (RLU) and is saved on the Clean-Trace NGi luminometer.

On completion of testing, hygiene data can be uploaded from the Clean-Trace NGi luminometer to the Clean-Trace online reporting system and at this point, any updates to sample plans created on the system are downloaded to the luminometer.

The uploaded hygiene data is stored and analysed automatically on the Clean-Trace online reporting system. In turn, the system automatically generates and distributes informative hygiene reports according to the report type, scheduled frequency and specified recipients as determined by the hospital.

Reports are delivered directly by email in PDF format to all identified stakeholders.

Examples of some of the report types available are shown over the page:

Who	Date	Time	Size	Subject
cleantracereport	30/04/2009	09:00	131,168	MonthToDate Hygiene Map report
cleantracereport	01/05/2009	09:00	131,162	MonthToDate Hygiene Map report
cleantracereport	06/05/2009	09:00	176,855	MonthToDate Hygiene Map report
cleantracereport	07/05/2009	09:04	176,855	MonthToDate Hygiene Map report
cleantracereport	08/05/2009	09:00	176,855	MonthToDate Hygiene Map report

From: <cleantracereport@mnm.com> To: dennis  
Subject: MonthToDate Hygiene Map report cc:

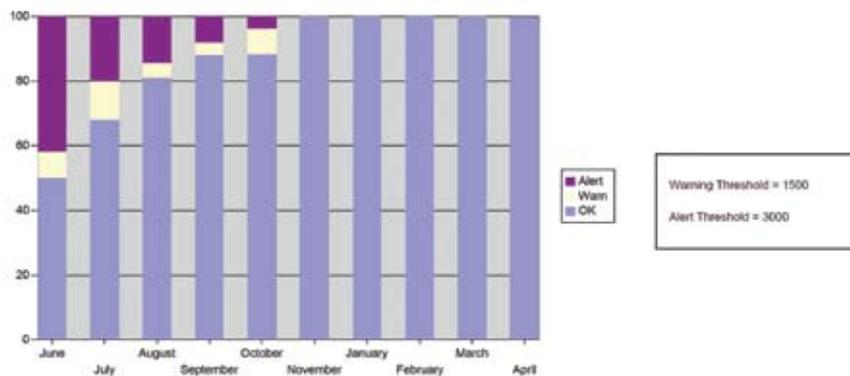
In addition to the auto-generated reports, the 3M™ Clean-Trace™ Online Reporting System provides specified recipients with automatic emails to alert individuals of any test points that have received a 'Fail' result. The email notifies the recipient of the 'Fail' RLU value and also the re-test RLU value, so confirming due diligence has been observed.

### Rolling-Month Hygiene Map for Hospital Name From: 05/04/2009 To: 05/05/2009

	06/04/2009 14:16	07/04/2009 15:59	08/04/2009 10:16	09/04/2009 11:17	10/04/2009 11:42	14/04/2009 15:07	15/04/2009 16:19	16/04/2009 08:49	20/04/2009 16:00	21/04/2009 16:18	22/04/2009 16:07	23/04/2009 12:17	24/04/2009 11:34	28/04/2009 16:07	30/04/2009 10:11	01/05/2009 11:36	
<b>NEONATAL UNIT</b>																	
Alarm Mute Btn Ventilator	209	890	1.1k	2.2k	209	1.3k	30	96	667	67	28	81	1.5k	81	43	124	
Bedside monitor screen	171	935	1.7k	2.8k	217	5.3k	205	387	4.7k	670	1.1k	247	412	226	897	184	
Clinical Bin Lid	240	229	721	306	478	146	26	261	5.4k	58	83	1.8k	379	68	666	77	
Cot Area Work Top Surface	460	914	1.3k	4.7k	601	224	535	295	708	265	809	847	2.2k	385	233	408	892
Drug Fridge handle	300	167	249	776	111	375	83	185	3.6k	333	156	343	212	122	55	438	
Floor Under Incubtr Cot	571	2.5k	1.6k	2.8k	158	1.7k	1.7k	1.5k		935	4.5k	479	1.9k	590	5.3k	545	
Keyboard	3.4k	2.7k	2.3k	2.9k	1.8k	694	157	311	8.4k	209	534	552	1.3k	1.6k	749	396	
Nurse Station	216	430	224	1.1k	327	1.1k	407	656	2.6k	361	1.9k	456	207	537	448	191	
On Off Switch Enteral Feed	376	122	2.2k	640	854	761	323	40	3.3k	912	79	60	148	91	548	306	
OnOffSwitch infusion pump	519	266	555	800	343	427	92	99	562	276	180	80	79	197	303	181	
OnOffSwitch suction jar	567	737	594	77	189	608	391	120	145	218	249	55	221	377	201	303	
OnOffSwitchSyringe driver	506	717	800	366	40	385	102	688	1.7k	134	258	72	174		322	448	
Shaft of drip stand	2.1k	296	141	391	115	108	42	29	2.8k	49	110	97	365	114	109	48	
Staff Rm Dr Handl Outside	667	578	837	424	313	789	660	88	390	116	136			90	367	121	
Staff Rm Dr Handle Inside	1.4k	509	1.1k	1.6k	179	1.9k	780	275	540	232	626		1.5k	217	93	914	
Storage Cupbrd Handle	856	231	602	148	108	524	118	30	962	274	182	175	225	100	106	225	
TapHandle wash hand basin	175	1.6k	209	270	71	302	88	337		138	225	91	705	281	554	154	
Top Intubation trolley	688	340	325	576	2.4k	158	121	230	2.8k	380	112	255	533	1.3k	2.6k	46	
Top of drug prep area	180	885	187	138	228	956	173	348	370	237	343	377	681	162	377	275	
Top of Incubator	123	326	236	379	263	71	48	122	975	55	266	707	891	524	333	1.3k	

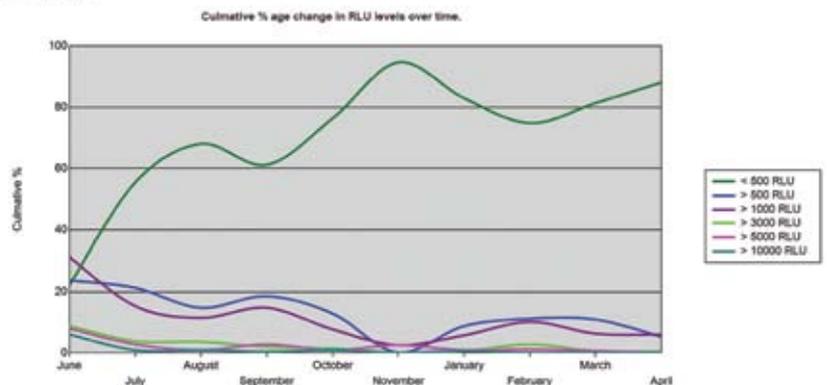
### Test Point MSS Trend YTD

Report: Results for Hospital Name: Test Point name  
Last 12 months



### Line Graph : Ward

Report: Results for Hospital Name  
Last 12 Months





## How can it help...

### Infection Prevention and Control Management and Teams

- Allows knowledge of the hygienic status of the whole hospital or Trust by providing scheduled reports delivered directly by email
- Reduces administration time in preparing and distributing hygiene reports
- Encourages hygiene awareness and a hospital wide responsibility for cleanliness
- Allows for the continual improvements of hygiene standards

### Facilities / Estates / Domestic Services

- Provides information to optimise cleaning regimes which can generate savings in associated cleaning costs
- Highlights 'high risk' areas and provides information for targeted cleaning
- Enables proactive cleaning schedules
- Excellent training tool – shows personnel an immediate link between good hygiene practice and the hygiene test result
- Allows cleaning personnel to demonstrate the effectiveness of their cleaning

### Chief Executives and Hospital Board Members

- Demonstrates a commitment to improving hospital cleanliness and hygiene standards
- Supports mandatory visual assessments with objective, quantitative hygiene data
- Helps improve hospital image and opportunity for positive PR
- Can help grow the public's confidence in cleanliness in hospitals
- Provides a hospital / Trust wide view of hygiene standards
- Helps support compliance with the Care Quality Commission requirements as set out in the Department of Health's Health and Social Care Act 2008: Code of Practice for the NHS on the prevention and control of Healthcare associated infections and related guidance, Compliance Criteria 2



**References:**

1. Department of Health, HCAI Technology Innovation Programme, Showcase Hospitals Report Number 2, The 3M™ Clean-Trace™ Clinical Hygiene Monitoring System. July 2009
2. The repeatability of hygiene test systems in measurement of low levels of ATP. W.J. Simpson, C.J. Giles, H.A. Flockhart. Cara Technology Limited, Leatherhead Enterprise Centre, UK Report 30606 , 27 July 2006.
3. Protocol for assessing the sensitivity of hygiene test systems for live microorganisms and food residue. W.J. Simpson, J.L. Archibald, C.J. Giles. Cara Technology Limited, Leatherhead Enterprise Centre, UK Report 120906, 27 July 2006.



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