



Inspection Report

Customer & Project Information

Name:	Dental & Orthodontic Center
Location:	ABU DHABI, UAE

Analysis of PCO Coating Efficacy

Please reference

Delivery	UAE
	Dated Dec-2010
PO No. (optional)	
Customer ID	
Reference No.	
Monitor System	Hygiena® System Sure II
System Protocols	UltraSnap ATP swab
ATP RLU Reading Description:	
<10	Safe
10-30	Caution
>30	Dangerous

Project Brief

One operation room of a well-known dental clinic in Abu Dhabi was provided for demonstration and testing of the efficacy of the Photocatalytic Oxidation (PCO) coating. The PCO coating was applied to the operation room and bacterial activity was monitored in the clinic with an ATP system.

The clinic maintains a strict sterilization protocol, following their normal sterilization process, ATP readings were taken. The result of most areas in the clinic was excellent which showed compliance with a very careful and strict sterilization process. However since there were many patients coming in and out continuously, harmful microbial increase couldn't be avoided. The ATP system indicated several areas with high microbial activity which were classified at the "Caution" or "Dangerous" level by ATP system.

After the initial monitor, the PCO coating was installed in the entire operation room, not only for the high risk area, because a good sterilization protocol shouldn't be designed only to kill the bacteria on the high risk surface, but also to eliminate the air-borne bacteria droplets in the air. This would insure the entire room was in a safe situation for a long time, even when visitors or the HVAC systems introduced outer bacteria.



Before Coating Analysis

Sampling Time: 2010-Dec-14
 Sampling Location: 8
 Remark: The sampling was done after routine sterilizing and cleaning process.

Location	RLU Value	Safe	Caution	Dangerous	Conclusion
Water & soap tap	37	<10	10-30	>30	Dangerous
Operation lamp handle	21	<10	10-30	>30	Caution
Operation tools platform & control panel	4	<10	10-30	>30	Safe
Doctor's phone	15	<10	10-30	>30	Caution
Operation chair handle	38	<10	10-30	>30	Dangerous
Spitting pool	76	<10	10-30	>30	Dangerous
Switches of the Operation room	20	<10	10-30	>30	Caution
Control panel	3	<10	10-30	>30	Safe

Picture Record below listed:



Water & soap tap @ 37-dangerous



Operation lamp handle @ 21-caution



Operation tools platform & control panel @ 4-safe



Doctor's phone @ 15- caution



Operation chair handle @ 38-dangerous



Spitting pool @ 76-dangerous



Switches of the Operation room @ 20-caution



Control panel @ 3-safe

Remark:

The PCO coating was applied on **all** the clinic, not restricted to the high risk area, please refer to the project brief.

The after coating analysis was **only** done on the **high risk** area.

Our test reports do not relieve you from the obligation of testing for your own intents and purposes.



After Coating Analysis

Sampling Time: 2010-Dec-15
 Sampling Location: 6
 Remark: The sampling was done after 24 hours of coating, and no other sterilizing process.
 Only the high risk area in previous test were sampled in this test.

Location	RLU Value	Safe	Caution	Dangerous	Conclusion
Water & soap tap	8	<10	10-30	>30	Safe
Operation lamp handle	5	<10	10-30	>30	Safe
Doctor's phone	4	<10	10-30	>30	Safe
Operation chair handle	7	<10	10-30	>30	Safe
Spitting pool	2	<10	10-30	>30	Safe
Switches of the Operation room	7	<10	10-30	>30	Safe

Picture Record below listed:



Water & soap tap @ 8-safe



Doctor's phone @ 4-safe



Operation chair handle @ 7-safe



Spitting pool @ 2-safe



Switches of the Operation room @ 7-safe

Conclusion

The PCO coating showed excellent anti-bacterial function after coating. It can reduce the bacterial risk in hospital, clinic obviously. We suggest the customer do monthly ATP (or equivalent) tests to make sure the PCO coating works properly after installing.