

Review the effectiveness of the BacTerminator® Dental in dental units

PROJECT MANAGEMENT: Dr. med. dent. Anette Simonis, Charité University Medicine, Berlin.

TEST SCENARIO: Two BacTerminator® Dental were each connected to a dental unit in the clinic. Before the test period the dental units used a continuous disinfection system with hydrogen peroxide and silver ions, but the units – especially one of them still had problems with frequently high numbers of heterotrophic plate counts.

During the test period, water samples from instruments and cup filler were taken regularly and analyzed for heterotrophic plate count, *Legionella* und *Pseudomonas aeruginosa*. *Legionella* und *Pseudomonas aeruginosa* were not detected in the water system before or during the study period.

TEST RESULT: In the test report, Dr. Anette Simonis concludes following about the effect of BacTerminator® Dental:

“The varying colony counts before installation of the BacTerminator suggest that significant changes in the microbiological biocoenosis of the treatment unit’s water system take place within a short time. A more stable microbiological status was achieved during operation of the unit with the BacTerminator”.

Dr. Simonis also emphasizes that it is important to perform routine flushing procedures of the instruments and cup filler even when using the BacTerminator® Dental.

Extract of measurements of water from a dental unit (BacTerminator® Dental is installed 12.01.2016)							
Date	Test day	Multifunction syringe		Micromotor		Cup filler	
		Heterotrophic plate count****		Heterotrophic plate count		Heterotrophic plate count	
		*CFU/mL 22°C	CFU/mL 37°C	CFU/mL 22°C	CFU/mL 37°C	CFU/mL 22°C	CFU/mL 37°C
Disinfection method: Hydrogen peroxide and silver ions							
09.07.2013		99999**	4032	99999	1376	4160	1120
02.09.2013		0***	1472	480	1430	38	1130
13.01.2014		0	880	0	448	72	228
28.04.2014		94	0	62	148	0	98
15.07.2014		96	99999	96	99999	96	99999
29.09.2014		164	80	164	80	164	80
09.02.2015		0	0	10	252	12	0
07.07.2015		99999	440	16	68	72	0
12.01.2016	0	0	0	0	0	0	0
Disinfection method: BacTerminator® Dental							
13.01.2016	1	0	0	0	0	0	0
15.01.2016	3	0	0	0	0	0	0
18.01.2016	6	0	2	2	6	0	0
20.01.2016	8	0	0	0	0	0	0
25.01.2016	13	0	0	0	0	0	0
28.01.2016	16	0	0	0	0	0	0
01.02.2016	20	0	0	0	0	0	0
08.02.2016	27	2	0	0	4	0	0
16.02.2016	35	0	0	0	0	0	0
22.02.2016	41	0	0	0	0	0	0
29.02.2016	48	0	0	0	0	0	0
07.03.2016	55	14	0	0	0	0	0
14.03.2016	62	0	0	0	0	0	0
05.04.2016	84	10	4	0	0	0	0
18.04.2016	97	0	2	0	0	0	0
03.05.2016	112	0	0	0	0	0	0
30.05.2016	139	6	0	2	0	0	0



*Colony forming units (CFU) ** 99999 is written when there is complete overgrowth on the agar plates (too many colonies for counting). ***"0" represents values under detection limit (<1 CFU/0.5 mL) ****cultured on tryptone soya agar for 2 days.