

## Verification & Validation BioCool, SAFE WATER tablets

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2016-09-12	day Gal	Lars Karlsson
Reviewed and approved date:	Name	Clarification of signature
2017-09-15	Mul	Paul Storr

Report updated in September to revision B after an additional water test was conducted.

## Scope:

Verify the effectiveness of the BioCool SAFE WATER tablets, used in BW-50-003 Water Mattress.

## Setup:

A water mattress, BW-50-003, was filled with lukewarm tap water (4550g) and five tablets of BioCool Safewater (1 tablet per litre of water).

The water mattress was placed on a Baby Warmer heating pad (sn 1051 37772) and the control unit (sn:1653/13) was set to 37°C. The device was covered with a blanket keeping it blocked from direct sunlight.

Test started 9<sup>th</sup> of September 2016 and ended in 24<sup>th</sup> of March 2017. Samples were taken at two different times and were sent to Eurofins, an accredited laboratory by SWEDAC for analysis. An additional test of the water was conducted after one year in use the 12<sup>th</sup> of September 2017.

First sample of water solution was sent to the laboratory 11<sup>th</sup> of November-2016 and results arrived the 24<sup>th</sup> of November. The water had then been held in a controlled temperature of 37°C for 11 weeks before sending to Eurofins.

Analys	Resultat	Enhet	Māto.	Metod/ref	
Odlingsbara mikroorganismer 22°C	<1	cfu/ml		ISO 6222	a)
Långsamväxande bakterier	<1	cfu/ml		ISO 6222 mod	0)
Koliforma bakterier 35°C	<1	cfu/100 ml		SS 028167-2 mod.	a)
Escherichia coli	<1	cfu/100 ml		SS 028167-2 mod. SS-EN ISO 9308-1/AC.2008	<b>a</b> )
Presumtiva Clostridium perfringens	<1	cfu/100 ml		ISO/CD 6461-2	8)
Intestinala enterokocker	<1	cfu/100 ml		SS-EN ISO 7899-2:2000	a)
Jästsvamp	<1	cfu/100 ml		SS 028192-1	<b>a</b> )
Mögelsvamp	<1	cfu/100 ml		SS 028192-1	a)
Mikrosvamp	<1	/100 mi			a)
Aktinomyceter	<1	cfu/100 ml		SS 028212-1	a)

The second sample of water (from the same mattress) was sent the 24<sup>th</sup> of April-2017 another 16 weeks after the first sample. Total weeks of testing "growing" water samples were 27weeks.

Analys	Resultat	Enhet	Māto.	Metod/ref	
Odlingsbara mikroorganismer 22°C	2	cfu/ml		ISO 6222	a)
Långsamväxande bakterier	2	cfu/ml		ISO 6222 mod	a)
Koliforma bakterier 35°C	<1	cfu/100 ml		SS 028167-2 mod.	a)
Escherichia coli	<1	cfu/100 ml		SS 028167-2 mod, SS-EN ISO 9308-1/AC:2008	a)
Presumtiva Clostridium perfringens	<1	cfu/100 ml		ISO/CD 6461-2	a)
Intestinala enterokocker	<1	cfu/100 ml		SS-EN ISO 7899-2.2000	a)
Jästsvamp	<1	cfu/100 ml		SS 028192-1	a)
Mögelsvamp	<1	cfu/100 ml		SS 028192-1	a)
Mikrosvamp	<1	/100 ml			a)
Aktinomyceter	<1	cfu/100 ml		SS 028212-1	a)

The final sample of water was sent to Eurofins the  $12^{th}$  of September-2017. Total weeks in use were 52, one year after the initial test was started.

The result from the that was received and presented below. Test number 177-2017-09120873.

Analys	Resultat	Enhet	Mato.	Metod/ref	
Odlingsbara mikroorganismer 22 °C	<1	cfu/ml		ISO 6222	8)
Långsamväxande bakterler	1	cfu/ml		ISO 6222 mod	a)
Koliforma bakterier 35°C	<1	cfu/100 ml		SS 028167-2 mod	a)
Escherichia coli	<1	cfu/100 ml		SS 028167-2 mod. SS-EN ISO 9308-1/AC:2008	8)
Presumtiva Clostridium perfringens	<1	cfu/100 ml		ISO/CD 6461-2	a)
Intestinala enterokocker	<1	ctu/100 ml		SS-EN ISO 7899-2:2000	a)
Jästsvamp	<1	cfw/100 ml		SS 028192-1	a)
Mögelsvamp	<1	ctu/100 ml	17 111727	SS 028192-1	a)
Mikrosvamp	<1	/100 ml			a)
Aktinomyceter	<1	cfu/100 ml		SS 028212-1	a)

## **Conclusion:**

Our conclusion based on the results provided from Eurofins that use of BioCool prevents organisms from growing in the water mattress over time.

Microbiological assessment has been made with the result that the water is useful. Assessment according to SLV FS 2001: 30

By filling the Kanmed the Water Mattress with tap water and one tablet of BioCool SAFE WATER per litre of water, the water will stay free from growing bacteria's and fungus.

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