

6.4 Danish Hydro Institute: Certificate of Analysis

The expert in WATER ENVIRONMENTS



Revised Analytical report

Client: Solarsack Aps, Fruebjergvej 3, 2100 Copenhagen, Denmark. *Att.: Alexander Løcke*

Samples: Spring water sampled at Kiwuunya on 21 August 2019 and spiked with either *E. coli* from a culture (ATCC 25922), water from Katanga or from Kikoni. The water was exposed to natural sunlight in Solarsacks made of MLLDPE + absorbers. Control sacks were kept in the shadow in the lab.

Laboratory: Department of Biochemistry and Sport Science, Makerere University, Kampala, Uganda.

Analytical methods: Analyses according to ISO 9308-1:2014 were performed by *Dr. Joseph F. Hawumba*, Department of Biochemistry and Sport Science. Analyses according to ISO 9308-3:1998 were performed by *Dr. Claus Jørgensen, DHI*.

Results:

<i>E. coli</i> /100 ml according to ISO 9308-1			
Sampling time (hours from start)	Spiked with water from		
Test Sacks	<i>E. coli</i> culture	Katanga	Kikoni
0	$2.7 \cdot 10^5$	$2.2 \cdot 10^5$	$2.2 \cdot 10^4$
1,5	$5.2 \cdot 10^2$	$1.3 \cdot 10^4$	$4.5 \cdot 10^3$
2,6	< 1	$6.2 \cdot 10^2$	$1.3 \cdot 10^2$
3,5	< 1		1
4,6	< 1	1	< 1
Reduction:	>99.999%	99.999	>99,99
Control Sacks:	0	$4.9 \cdot 10^5$	$2.3 \cdot 10^4$
	4,7	$3.9 \cdot 10^5$	$3.5 \cdot 10^4$

<i>E. coli</i> /100 ml according to ISO 9308-3			
Sampling time (hours from start)	Spiked with water from		
Test Sacks	<i>E. coli</i> culture	Katanga	Kikoni
0	$3.5 \cdot 10^5$	$6.2 \cdot 10^4$	$6.6 \cdot 10^3$
1,5	< $2,8 \cdot 10^2$	$2.9 \cdot 10^4$	$7.3 \cdot 10^3$
2,6	< 15	$4.9 \cdot 10^2$	$6.1 \cdot 10^1$
3,5	Not analyzed	Not analyzed	Not analyzed
4,6	< 15	< 15	< 15
Reduction:	>99.99	>99.9	>99
Control Sacks:	0	$2.3 \cdot 10^4$	$7.3 \cdot 10^3$
	4,7	$2.4 \cdot 10^4$	$1.9 \cdot 10^4$

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Dr. Claus Jørgensen, DHI



DHI A/S
Agern Allé 5
DK-2970 Hørsholm
Denmark
+45 4516 9200
www.dhigroup.com