

## Summary

- No major issues.
- Water analysis for operations is now ongoing on a weekly basis.
- Batch 9 results show all dispensers operating within regulatory limits.
- Free chlorine has been reduced and is now between 0 and 0.1 ppm free chlorine).

## Sub-systems status:

### 1. Source water

- Supply continues with no issues. Water test results remain as expected (brackish source, with high TSS, TDS, sodium and fluoride).

### 2. Reverse osmosis

- Unit working normally and operating at production volumes. No issues.

### 3. Ice production

- Both units working normally and operating at production volumes. No issues.

### 4. Dispensing systems

- All units working normally and operating at production volumes. No issues.

### 5. Wastewater

- Operational. No issues.

### 6. Power

- Supply as expected. No issues.

### 7. General unit management.

- Change management programme has been initiated with questionnaires and user opinions being gathered and documented.
- Results are now being posted above each dispenser to enable users to see the water quality.
- Consumption of source water, product water (and ice) and production of wastewater are now being monitored.
- Test results for Batch 9 are attached below.

AUGUST 31<sup>ST</sup>, 2015

BASIS AFRICA LTD  
NAIROBI, KENYA

**ATT: IAIN BREWSTER**

Dear Sir,

**RE: WATER QUALITY ANALYSIS REPORT-DISPENSER 1 (BATCH 9)**

We refer to the water sample submitted to our laboratory for Bacteriological analysis. Attached please find the results.

We look forward to working with you.

Yours faithfully  
For **AQUATECH INDUSTRIES LTD.**



**GIDEON MAINA**  
GENERAL MANAGER

**AARON MUTHOKA**  
WATER QUALITY LAB.

# AQUATECH INDUSTRIES LTD.

AUGUST 31<sup>ST</sup>, 2015

## **BACTERIOLOGICAL ANALYSIS**

Sample N<sup>o</sup> : 1508/87  
Lpo N<sup>o</sup> : -  
Date Sampled : 26/08/2015  
Date Received : 27/08/2015  
Sample Source : WATER SAMPLE-KAPESE- DISPENSER 1 (BATCH 9)  
Sample Submitted by : BASIS AFRICA

### **EXAMINATION RESULTS.**

TEST	KS 459 – 1: 2007 THIRD EDITION 2007	RESULTS
Total Bacteria Count/ ml	100 Max	<1
MPN of Coliform Organisms in a 100 ml sample	Shall be absent	ND
MPN of E- Coli Organisms in a 100 ml sample	Shall be absent	ND
MPN of Feacal Coliform Organisms in a 100 ml sample	Shall be absent	ND

**MPN: Most Probable Number**

**ND: Not Detected**

**KS: Kenya Standard (KEBS 2007)**

The results relate to the sample(s) submitted. The laboratory will not be held responsible for any sampling errors.



**AARON MUTHOKA**  
WATER QUALITY LAB

AUGUST 31<sup>ST</sup>, 2015

BASIS AFRICA LTD  
NAIROBI, KENYA

**ATT: IAIN BREWSTER**

Dear Sir,

**RE: WATER QUALITY ANALYSIS REPORT-DISPENSER 3 (BATCH 9)**

We refer to the water sample submitted to our laboratory for Bacteriological analysis. Attached please find the results.

We look forward to working with you.

Yours faithfully  
For **AQUATECH INDUSTRIES LTD.**



**GIDEON MAINA**  
GENERAL MANAGER

**AARON MUTHOKA**  
WATER QUALITY LAB.

# AQUATECH INDUSTRIES LTD.

AUGUST 31<sup>ST</sup>, 2015

## **BACTERIOLOGICAL ANALYSIS**

Sample N<sup>o</sup> : 1508/88  
Lpo N<sup>o</sup> : -  
Date Sampled : 26/08/2015  
Date Received : 27/08/2015  
Sample Source : WATER SAMPLE-KAPESE- DISPENSER 3 (BATCH 9)  
Sample Submitted by : BASIS AFRICA

### **EXAMINATION RESULTS.**

TEST	KS 459 – 1: 2007 THIRD EDITION 2007	RESULTS
Total Bacteria Count/ ml	100 Max	<1
MPN of Coliform Organisms in a 100 ml sample	Shall be absent	ND
MPN of E- Coli Organisms in a 100 ml sample	Shall be absent	ND
MPN of Feacal Coliform Organisms in a 100 ml sample	Shall be absent	ND

**MPN: Most Probable Number**

**ND: Not Detected**

**KS: Kenya Standard (KEBS 2007)**

The results relate to the sample(s) submitted. The laboratory will not be held responsible for any sampling errors.



**AARON MUTHOKA**  
WATER QUALITY LAB

AUGUST 31<sup>ST</sup>, 2015

BASIS AFRICA LTD  
NAIROBI, KENYA

**ATT: IAIN BREWSTER**

Dear Sir,

**RE: WATER QUALITY ANALYSIS REPORT-DISPENSER 5 (BATCH 9)**

We refer to the water sample submitted to our laboratory for Bacteriological analysis. Attached please find the results.

We look forward to working with you.

Yours faithfully  
For **AQUATECH INDUSTRIES LTD.**



**GIDEON MAINA**  
GENERAL MANAGER

**AARON MUTHOKA**  
WATER QUALITY LAB.

# AQUATECH INDUSTRIES LTD.

AUGUST 31<sup>ST</sup>, 2015

## **BACTERIOLOGICAL ANALYSIS**

Sample N<sup>o</sup> : 1508/89  
Lpo N<sup>o</sup> : -  
Date Sampled : 26/08/2015  
Date Received : 27/08/2015  
Sample Source : WATER SAMPLE-KAPESE- DISPENSER 5 (BATCH 9)  
Sample Submitted by : BASIS AFRICA

### **EXAMINATION RESULTS.**

TEST	KS 459 – 1: 2007 THIRD EDITION 2007	RESULTS
Total Bacteria Count/ ml	100 Max	<1
MPN of Coliform Organisms in a 100 ml sample	Shall be absent	ND
MPN of E- Coli Organisms in a 100 ml sample	Shall be absent	ND
MPN of Feacal Coliform Organisms in a 100 ml sample	Shall be absent	ND

**MPN: Most Probable Number**

**ND: Not Detected**

**KS: Kenya Standard (KEBS 2007)**

The results relate to the sample(s) submitted. The laboratory will not be held responsible for any sampling errors.



**AARON MUTHOKA**  
WATER QUALITY LAB

AUGUST 31<sup>ST</sup>, 2015

BASIS AFRICA LTD  
NAIROBI, KENYA

**ATT: IAIN BREWSTER**

Dear Sir,

**RE: WATER QUALITY ANALYSIS REPORT-DISPENSER 7 (BATCH 9)**

We refer to the water sample submitted to our laboratory for Bacteriological analysis. Attached please find the results.

We look forward to working with you.

Yours faithfully  
For **AQUATECH INDUSTRIES LTD.**



**GIDEON MAINA**  
GENERAL MANAGER

**AARON MUTHOKA**  
WATER QUALITY LAB.



# AQUATECH INDUSTRIES LTD.

AUGUST 31<sup>ST</sup>, 2015

## **BACTERIOLOGICAL ANALYSIS**

Sample N<sup>o</sup> : 1508/90  
Lpo N<sup>o</sup> : -  
Date Sampled : 26/08/2015  
Date Received : 27/08/2015  
Sample Source : WATER SAMPLE-KAPESE- DISPENSER 7 (BATCH 9)  
Sample Submitted by : BASIS AFRICA

### **EXAMINATION RESULTS.**

TEST	KS 459 – 1: 2007 THIRD EDITION 2007	RESULTS
Total Bacteria Count/ ml	100 Max	<1
MPN of Coliform Organisms in a 100 ml sample	Shall be absent	ND
MPN of E- Coli Organisms in a 100 ml sample	Shall be absent	ND
MPN of Feacal Coliform Organisms in a 100 ml sample	Shall be absent	ND

**MPN: Most Probable Number**

**ND: Not Detected**

**KS: Kenya Standard (KEBS 2007)**

The results relate to the sample(s) submitted. The laboratory will not be held responsible for any sampling errors.



**AARON MUTHOKA**  
WATER QUALITY LAB

AUGUST 31<sup>ST</sup>, 2015

BASIS AFRICA LTD  
NAIROBI, KENYA

**ATT: IAIN BREWSTER**

Dear Sir,

**RE: WATER QUALITY ANALYSIS REPORT-CONTROL (BATCH 9)**

We refer to the water sample submitted to our laboratory for Physical Chemical and Bacteriological analysis. Attached please find the results.

We look forward to working with you.

Yours faithfully  
For **AQUATECH INDUSTRIES LTD.**



**GIDEON MAINA**  
GENERAL MANAGER

**AARON MUTHOKA**  
WATER QUALITY LAB.

# AQUATECH INDUSTRIES LTD.

AUGUST 31<sup>ST</sup>, 2015

## WATER QUALITY ANALYSIS: PHYSICAL & CHEMICAL TESTS

Sample N<sup>o</sup> : 1508/85  
Lpo N<sup>o</sup> : -  
Date Sampled : 26/08/2015  
Date Received : 27/08/2015  
Sample Source : WATER SAMPLE-KAPESE – CONTROL (BATCH 9)  
Sample Submitted by : BASIS AFRICA

PARAMETERS	UNITS	RESULTS	KS 459 – 1: 2007 THIRD EDITION 2007
<b>PHYSICAL TESTS</b>			
PH	pH Units	7.90	6.5 – 8.5
Turbidity	NTU	0.19	< 5.0
Color	Pt. Co. APHA	3.0	15 TCU
Total Suspended Solids	Mg/l	ND	NIL
Total Dissolved Solids	Mg/L	24.1	1000 Max.
Conductivity	Micro Siemens/cm	51.5	NS
<b>CHEMICAL TESTS (ANIONS)</b>			
Phenolphthalein Alkalinity	Mg/l CaCO <sub>3</sub>	ND	NS
Total Alkalinity	Mg/l CaCO <sub>3</sub>	13.0	NS
Chloride	Mg/l Cl <sup>-</sup>	8.0	250
Fluoride	Mg/l F	0.08	1.5
Sulfate	Mg/l SO <sub>4</sub>	ND	400
Nitrate	Mg/L NO <sub>3</sub>	1.2	50
Nitrite	Mg/l NO <sub>2</sub>	0.003	3.0
Phosphate	Mg/l PO <sub>4</sub> <sup>-3</sup>	0.10	2.2
Sulfide	Mg/l S <sup>2-</sup>	0.001	0.1
<b>CHEMICAL TESTS (CATIONS)</b>			
Sodium	Mg/l Na	12.05	200
Potassium	Mg/l K	0.6	50
Calcium	Mg/l Ca	0.38	150
Magnesium	Mg/l Mg	0.06	100
Iron	Mg/l Fe	0.04	0.3
Manganese	Mg/l Mn	0.3	0.5
Ammonia	Mg/l NH <sub>3</sub>	0.02	0.5
Copper	Mg/l Cu	0.07	1.0
Zinc	Mg/l Zn	0.03	5.0
Chromium	Mg/l Cr	0.019	0.05
<b>OTHER PARAMETERS</b>			
Total Hardness	Mg/l CaCO <sub>3</sub>	7.0	300
Calcium Hardness	Mg/l Ca <sup>2+</sup>	1.99	NS
Magnesium Hardness	Mg/l Mg <sup>2+</sup>	0.79	NS
Dissolved Silica	Mg/l SiO <sub>2</sub>	5.2	NS
Free Chlorine	Mg/l Cl <sub>2</sub>	0.04	0.2
Free Carbon Dioxide	Mg/l CO <sub>2</sub>	2.0	NS

**NS: No Set Standard**

**ND: Not Detected**

**KS: Kenya Standard (KEBS 2007)**

The results relate to the sample(s) submitted. The laboratory will not be held responsible for any sampling errors



**AARON MUTHOKA**  
WATER QUALITY LAB.

# AQUATECH INDUSTRIES LTD.

AUGUST 31<sup>ST</sup>, 2015

## **BACTERIOLOGICAL ANALYSIS**

Sample N<sup>o</sup> : 1508/85  
Lpo N<sup>o</sup> : -  
Date Sampled : 26/08/2015  
Date Received : 27/08/2015  
Sample Source : WATER SAMPLE-KAPESE – CONTROL(BATCH 9)  
Sample Submitted by : BASIS AFRICA

### **EXAMINATION RESULTS.**

TEST	KS 459 – 1: 2007 THIRD EDITION 2007	RESULTS
Total Bacteria Count/ ml	100 Max	<1
MPN of Coliform Organisms in a 100 ml sample	Shall be absent	ND
MPN of E- Coli Organisms in a 100 ml sample	Shall be absent	ND
MPN of Faecal Coliform Organisms in a 100 ml sample	Shall be absent	ND

**MPN: Most Probable Number**

**ND: Not Detected**

**KS: Kenya Standard (KEBS 2007)**

The results relate to the sample(s) submitted. The laboratory will not be held responsible for any sampling errors.



**AARON MUTHOKA**  
WATER QUALITY LAB

AUGUST 31<sup>ST</sup>, 2015

BASIS AFRICA LTD  
NAIROBI, KENYA

**ATT: IAIN BREWSTER**

Dear Sir,

**RE: WATER QUALITY ANALYSIS REPORT-ICE MACHINE 1 (BATCH 9)**

We refer to the water sample submitted to our laboratory for Physical Chemical and Bacteriological analysis. Attached please find the results.

We look forward to working with you.

Yours faithfully  
For **AQUATECH INDUSTRIES LTD.**



**GIDEON MAINA**  
GENERAL MANAGER

**AARON MUTHOKA**  
WATER QUALITY LAB.

# AQUATECH INDUSTRIES LTD.

AUGUST 31<sup>ST</sup>, 2015

## WATER QUALITY ANALYSIS: PHYSICAL & CHEMICAL TESTS

Sample N<sup>o</sup> : 1508/86  
 Lpo N<sup>o</sup> : -  
 Date Sampled : 26/08/2015  
 Date Received : 27/08/2015  
 Sample Source : WATER SAMPLE-KAPESE – ICE MACHINE 1 (BATCH 9)  
 Sample Submitted by : BASIS AFRICA

PARAMETERS	UNITS	RESULTS	KS 459 – 1: 2007 THIRD EDITION 2007
<b>PHYSICAL TESTS</b>			
PH	pH Units	7.65	6.5 – 8.5
Turbidity	NTU	0.57	< 5.0
Color	Pt. Co. APHA	1.0	15 TCU
Total Suspended Solids	Mg/l	ND	NIL
Total Dissolved Solids	Mg/L	14.8	1000 Max.
Conductivity	Micro Siemens/cm	32.1	NS
<b>CHEMICAL TESTS (ANIONS)</b>			
Phenolphthalein Alkalinity	Mg/l CaCO <sub>3</sub>	ND	NS
Total Alkalinity	Mg/l CaCO <sub>3</sub>	6.0	NS
Chloride	Mg/l Cl <sup>-</sup>	6.0	250
Fluoride	Mg/l F	ND	1.5
Sulfate	Mg/l SO <sub>4</sub>	ND	400
Nitrate	Mg/L NO <sub>3</sub>	0.6	50
Nitrite	Mg/l NO <sub>2</sub>	0.003	3.0
Phosphate	Mg/l PO <sub>4</sub> <sup>-3</sup>	0.09	2.2
Sulfide	Mg/l S <sup>2-</sup>	ND	0.1
<b>CHEMICAL TESTS (CATIONS)</b>			
Sodium	Mg/l Na	8.09	200
Potassium	Mg/l K	0.6	50
Calcium	Mg/l Ca	1.60	150
Magnesium	Mg/l Mg	0.02	100
Iron	Mg/l Fe	0.01	0.3
Manganese	Mg/l Mn	0.3	0.5
Ammonia	Mg/l NH <sub>3</sub>	0.01	0.5
Copper	Mg/l Cu	0.01	1.0
Zinc	Mg/l Zn	0.08	5.0
Chromium	Mg/l Cr	0.005	0.05
<b>OTHER PARAMETERS</b>			
Total Hardness	Mg/l CaCO <sub>3</sub>	4.0	300
Calcium Hardness	Mg/l Ca <sup>2+</sup>	2.30	NS
Magnesium Hardness	Mg/l Mg <sup>2+</sup>	0.89	NS
Dissolved Silica	Mg/l SiO <sub>2</sub>	1.0	NS
Free Chlorine	Mg/l Cl <sub>2</sub>	ND	0.2
Free Carbon Dioxide	Mg/l CO <sub>2</sub>	1.0	NS

**NS: No Set Standard**

**ND: Not Detected**

**KS: Kenya Standard (KEBS 2007)**

The results relate to the sample(s) submitted. The laboratory will not be held responsible for any sampling errors



**AARON MUTHOKA**  
 WATER QUALITY LAB.

# AQUATECH INDUSTRIES LTD.

AUGUST 31<sup>ST</sup>, 2015

## **BACTERIOLOGICAL ANALYSIS**

Sample N<sup>o</sup> : 1508/86  
Lpo N<sup>o</sup> : -  
Date Sampled : 26/08/2015  
Date Received : 27/08/2015  
Sample Source : WATER SAMPLE-KAPESE – ICE MACHINE 1 (BATCH 9)  
Sample Submitted by : BASIS AFRICA

### **EXAMINATION RESULTS.**

TEST	KS 459 – 1: 2007 THIRD EDITION 2007	RESULTS
Total Bacteria Count/ ml	100 Max	<1
MPN of Coliform Organisms in a 100 ml sample	Shall be absent	ND
MPN of E- Coli Organisms in a 100 ml sample	Shall be absent	ND
MPN of Faecal Coliform Organisms in a 100 ml sample	Shall be absent	ND

**MPN: Most Probable Number**

**ND: Not Detected**

**KS: Kenya Standard (KEBS 2007)**

The results relate to the sample(s) submitted. The laboratory will not be held responsible for any sampling errors.



**AARON MUTHOKA**  
WATER QUALITY LAB