


**CERTIFICATE OF MICROBIOLOGICAL ANALYSIS
 TEST REPORT**

Sample From: **Nkangala District Municipality** Address: **Posbus 437**
Municipal Health Services **Walter Sisulu**
Emakhazeni Town Council **Middelburg**
1050

Date Received: **19-Sep-17**
 Date Analyzed: **19-Sep-17**
 Date Reported: **21-Sep-17**
 Quantity Analyzed: **23**

Ref No: **I 1264 - 1286 / 17 B**

| LAB NO | | SAMPLE NAME | STERILIZED BOTTLE | | STANDARD LIMITS | | | | |
|--------|----------|------------------------------|-------------------|----|-------------------------------------|------------------------------|----------------------------------|--------------------------------------|--------------|
| | | | | | ≤ 10 | Nil | Nil | ≤ 1000 | |
| | | | | | TOTAL COLIFORM BACTERIA PER / 100ML | FAECAL COLIFORM PER / 100 ML | ESCHERISCHIA COLIFORM PER 100 ML | HETEROTROPHIC PLATE COUNT PER 1.0 ML | |
| | BF | BELFAST | YES | NO | A / B | | | | |
| I 1264 | 17/08/09 | Belfast Sewerworks Final | X | | - | B | >1000 | - | - |
| I 1265 | 11/9/17 | Belfast Waterworks Inlet Dam | X | | 461 | B | 5 | 3 | 196 |
| I 1266 | 26/9/17 | Belfast Waterworks Final | X | | Nil | B | Nil | Nil | 22 |
| I 1267 | 27/9/17 | Siyathuthuka Reservoir | X | | Nil | B | Nil | Nil | 25 |
| I 1268 | 28/9/17 | Belfast Old Reservoir | X | | Nil | B | Nil | Nil | 20 |
| I 1269 | 29/9/17 | Belfast New Reservoir | X | | Nil | B | Nil | Nil | 10 |
| I 1270 | 30/9/17 | Siyathuthuka Clinic | X | | Nil | B | Nil | Nil | 22 |
| I 1271 | 31/9/17 | Leratong Creche' | X | | Nil | B | Nil | Nil | 18 |
| | | | | | A- SANAS 5221 OR B - COLILERT | | SANS 5221 | COLILERT | SANS 5221 |

**S.A.N.S. 241-1:2015 Ed 2 MICROBIOLOGICAL REQUIREMENTS
 Allowable compliance for DRINKING WATER**

| Determinant | Risk | Unit | Standard limits |
|--|------------------|------------------|-----------------|
| Escherichia Coliform / or Faecal Coliform bacteria | Acute Health - 1 | Count per 100 ml | Not Detected |
| Heterotrophic Plate Count | Operational | Count per 1 ml | ≤ 1 000 |
| Total Coliform Bacteria | Operational | Count per 100 ml | ≤ 10 |

Results exceeding alert levels will require immediate remedial action and follow-up sampling.

EFFLUENT WATERRegional Standard (Department Water Affairs and Forestry) of 26 March 2004 No.399 for Waste water specifies : Waste water or Effluent shall **not** contain more than 1000 Faecal Coliform per 100 ml.

These results relate only to samples tested.
 Opinions and interpretations expressed herein are outside the scope of SANAS accreditation.
 # - Samples highlighted in grey are not within the limits as specified.

REMARKS:

- a.) The sample BELFAST WATERWORKS INLET DAM contains all types of bacteria. These bacteria are pathogenic (disease forming) in nature.

P.L.G UYS (M.D.)

Technical Signatory

SANS
 241-1
 Edition 2
 2015



CK: 89/14418/23
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Ref No: **I 1264 - 1286 / 17 B**

| LAB NO | BF | SAMPLE NAME | STERILIZED BOTTLE | | STANDARD LIMITS | | | | |
|--------|---------|-------------------------|-------------------|--|-------------------------------------|-------|------------------------------|----------------------------------|--------------------------------------|
| | | | | | ≤ 10 | | Nil | Nil | ≤ 1000 |
| | | | | | TOTAL COLIFORM BACTERIA PER / 100ML | A / B | FAECAL COLIFORM PER / 100 ML | ESCHERISCHIA COLIFORM PER 100 ML | HETEROTROPHIC PLATE COUNT PER 1.0 ML |
| I 1272 | 32/9/17 | Stand 342313 | X | | Nil | B | Nil | Nil | 10 |
| I 1273 | 33/9/17 | HA Grove Hospital | X | | Nil | B | Nil | Nil | 12 |
| I 1274 | 34/9/17 | Bottom End Liquor Store | X | | Nil | B | Nil | Nil | 13 |
| I 1275 | 35/9/17 | Belfast Old Age Home | X | | Nil | B | Nil | Nil | 12 |
| | | | | | A- SANAS 5221 OR B - COLILERT | | SANS 5221 | COLILERT | SANS 5221 |

S.A.N.S. 241-1:2015 Ed 2 MICROBIOLOGICAL REQUIREMENTS Allowable compliance for *DRINKING WATER*

| Determinant | Risk | Unit | Standard limits |
|--|------------------|------------------|-----------------|
| Escherichia Coliform / or Faecal Coliform bacteria | Acute Health - 1 | Count per 100 ml | Not Detected |
| Heterotrophic Plate Count | Operational | Count per 1 ml | ≤ 1 000 |
| Total Coliform Bacteria | Operational | Count per 100 ml | ≤ 10 |

Results exceeding alert levels will require immediate remedial action and follow-up sampling.

EFFLUENT WATER

Regional Standard (Department Water Affairs and Forestry) of 26 March 2004 No.399 for Waste water specifies : Waste water or Effluent shall **not** contain more than 1000 Faecal Coliform per 100 ml.

These results relate only to samples tested.

Opinions and interpretations expressed herein are outside the scope of SANAS accreditation.

- Samples highlighted in grey are not within the limits as specified.

REMARKS:

TNTC - Too numerous to count

a.) These samples fulfill the bacteriological criteria as specified by SANS 241 Standard for Human Consumption.

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Ref No: **I 1264 - 1286 / 17 B**

| LAB NO | WB | SAMPLE NAME | STERILIZED BOTTLE | | STANDARD LIMITS | | | | |
|--------|---------|--------------------------------|-------------------|----|-------------------------------------|------------------------------|----------------------------------|--------------------------------------|--------------|
| | | | YES | NO | ≤ 10 | Nil | Nil | ≤ 1000 | |
| | | | | | TOTAL COLIFORM BACTERIA PER / 100ML | FAECAL COLIFORM PER / 100 ML | ESCHERISCHIA COLIFORM PER 100 ML | HETEROTROPHIC PLATE COUNT PER 1.0 ML | |
| | | | | | | A / B | | | |
| I 1276 | 22/9/17 | Watervalboven Waterworks Final | X | | 145 | B | 5 | 2 | 159 |
| I 1277 | 23/9/17 | Boven Reservoir | X | | 145 | B | 9 | 5 | 126 |
| I 1278 | 24/9/17 | Stand P118 (602) | X | | 145 | B | 3 | 2 | 132 |
| I 1279 | 25/9/17 | Khayalami Service Centre | X | | 200 | B | 8 | 5 | 151 |
| I 1280 | 26/9/17 | Vulingcondo Stimulation Centre | X | | Nil | B | Nil | Nil | 103 |
| I 1281 | 27/9/17 | Mississippi Restaurant | X | | 1 | B | Nil | Nil | 21 |
| I 1282 | 28/9/17 | Technical Workshop | X | | 200 | B | Nil | Nil | 144 |
| I 1283 | 29//17 | Silverdays Old Age Home | X | | 66 | B | 10 | 4 | 138 |
| | | | | | A - SANAS 5221 OR B - COLILERT | | SANS 5221 | COLILERT | SANS 5221 |

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REMARKS:

TNTC - Too numerous to count

- a.) These samples **WATERVALBOVEN WATERWORKS FINAL, BOVEN RESERVOIR, STAND P118 (602), KHAYALAMI SERVICE CENTRE and SILVERDAYS OLD AGE HOME** contain all types of bacteria. These bacteria are pathogenic (disease forming) in nature. **DO NOT** use this water for Human Consumption.
- b.) The sample **TECHNICAL WORKSHOP** contains high levels of Total Coliform Bacteria. These bacteria are not pathogenic (disease forming) in nature, however it is advisable to Chlorinate this water to achieve complete disinfection.

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|--------|---------|--------------------------|-------------------|----|-------------------------------------|------------------------------|----------------------------------|--------------------------------------|--------------|
| | | | | | ≤ 10 | Nil | Nil | ≤ 1000 | |
| | | | | | TOTAL COLIFORM BACTERIA PER / 100ML | FAECAL COLIFORM PER / 100 ML | ESCHERISCHIA COLIFORM PER 100 ML | HETEROTROPHIC PLATE COUNT PER 1.0 ML | |
| | | | YES | NO | | A / B | | | |
| I 1284 | 29/9/17 | Leeuwspruit Before Sewer | X | | 816 | B | 60 | 51 | 219 |
| I 1285 | 31/9/17 | Leeuwspruit After Sewer | X | | >2420 | B | 2100 | 1986 | 1594 |
| I 1286 | 33/9/17 | Emthonjeni Sewer Final | X | | - | B | >1000 | - | - |
| | | | | | A - SANAS 5221 OR B - COLILERT | | SANS 5221 | COLILERT | SANS 5221 |

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