

REGEN WATERS

LABORATORY • LABORATORIUM

CK. 89/14418/23

4 Woltemade Street / Woltemadestraat 4
P.O. Box / Posbus 8328
WITBANK 1035
Web: www.regenwaters.com

Tel.: 013-690-1487
Fax / Faks: 013-656-5050
E-mail / Epos: regenlab@mweb.co.za

CERTIFICATE OF ANALYSIS

TRICHALOMETHANE COMPOUNDS (THM)

| SAMPLE INFORMATION | | LAB NUMBER | D218.D |
|--------------------|--|---------------|----------|
| DATE RECEIVED | 27-Sep-13 | DATE ANALYZED | 1-Oct-13 |
| CLIENT | Steve-Tswete | MATRIX | Water |
| SAMPLE NAME | Mafube | | |
| CONTAINER | Plastic | | |
| INSTRUMENT | Agilent 7890A GC/MS, Headspace 7697A, Solid Phase Extraction | | |

| COMPOUND | CONCENTRATION | UNITS |
|----------------------|---------------|----------|
| Chloroform | <10 | µg/liter |
| Trichloroethene | <10 | µg/liter |
| Bromodichloromethane | <10 | µg/liter |
| Dibromochloromethane | <10 | µg/liter |
| Bromoform | <10 | µg/liter |

Samples stored at 5°C after acceptance by Regen Waters.

This report is only applicable to the sample provided for testing.

Regen Waters cannot be held accountable for any errors that might have been caused by improper sampling, handling or storage of samples prior to acceptance.

Trihalomethane Result Interpretation

According to the South African National Standards 241-1: Ed1 2011 the limits for trihalomethane content in drinking water are:

| Compound | Concentration | Units |
|----------------------|---------------|----------|
| Chloroform | ≤300 | µg/liter |
| Bromoform | ≤100 | µg/liter |
| Dibromochloromethane | ≤100 | µg/liter |
| Bromodichloromethane | ≤60 | µg/liter |
| Trichloroethene* | ≤20 | µg/liter |

*Standard from the world health organization drinking water standard 2011 (Not technically a THM but is a frequently requested compound in conjunction with THM analysis.)

Trihalomethanes in potable water is a by-product of disinfection using chlorine and other disinfectants. The concentration of trihalomethanes in potable water needs to be monitored, as long term consumption of high concentrations can lead to chronic ailments.

The sample submitted **Steve-Tswete Mafube** complies with the standards for trihalomethane content in drinking water.



P.L.G UYS (M.D)

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CERTIFICATE OF ANALYSIS

SCREENING FOR PHENOLIC COMPOUNDS

SAMPLE INFORMATION

| SAMPLE INFORMATION | | LAB NUMBER | D218.D |
|--------------------|---|-----------------|-------------|
| DATE RECEIVED | 27-Sep-13 | DATE ANALYZED | 3-Oct-13 |
| CLIENT | Steve-Tswete | MATRIX | Water |
| SAMPLE NAME | Mafube | | |
| CONTAINER | Plastic | DILUTION FACTOR | No Dilution |
| INSTRUMENT | Agilent 7890A GC/MS, Headspace 7697A, Solid Phase Microextraction | | |

COMPOUND CONCENTRATION UNITS

| | | |
|---------------------------|---------------|-----------------|
| phenol | <10 | µg/liter |
| 2-chlorophenol | <10 | µg/liter |
| 2-methylphenol | <10 | µg/liter |
| 3+4-methylphenol | <10 | µg/liter |
| 2-nitrophenol | <10 | µg/liter |
| 2,4-dimethylphenol | <10 | µg/liter |
| 2,4-dichlorophenol | <10 | µg/liter |
| 2,6-dichlorophenol | <10 | µg/liter |
| 4-chloro-3-methylphenol | <10 | µg/liter |
| 2,3,5-trichlorophenol | <10 | µg/liter |
| 2,4,6-trichlorophenol | <10 | µg/liter |
| 2,4,5-trichlorophenol | <10 | µg/liter |
| 2,3,4-trichlorophenol | <10 | µg/liter |
| 2,3,6-trichlorophenol | <10 | µg/liter |
| 2,3,4,6-tetrachlorophenol | <10 | µg/liter |
| 2,3,5,6-tetrachlorophenol | <10 | µg/liter |
| 3,4,5-trichlorophenol | <10 | µg/liter |
| pentachlorophenol | <10 | µg/liter |
| DINOSEB | <10 | µg/liter |
| TOTAL IDENTIFIED | <10 | µg/liter |

Samples stored at 5°C after acceptance by Regen Waters.

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Regen Waters cannot be held accountable for any errors that might have been caused by improper sampling, handling or storage of samples prior to acceptance.

Results marked "***" concentration outside of calibration range, estimate only.



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CERTIFICATE OF ANALYSIS

TRIHALOMETHANE COMPOUNDS (THM)

| SAMPLE INFORMATION | | LAB NUMBER | D219.D |
|--------------------|--|---------------|----------|
| DATE RECEIVED | 27-Sep-13 | DATE ANALYZED | 2-Oct-13 |
| CLIENT | Steve-Tswete | MATRIX | Water |
| SAMPLE NAME | Doornkop 1 | | |
| CONTAINER | Plastic | | |
| INSTRUMENT | Agilent 7890A GC/MS, Headspace 7697A, Solid Phase Extraction | | |

| COMPOUND | CONCENTRATION | UNITS |
|----------------------|---------------|----------|
| Chloroform | <10 | µg/liter |
| Trichloroethene | <10 | µg/liter |
| Bromodichloromethane | <10 | µg/liter |
| Dibromochloromethane | <10 | µg/liter |
| Bromoform | <10 | µg/liter |

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Trihalomethane Result Interpretation

According to the South African National Standards 241-1: Ed1 2011 the limits for trihalomethane content in drinking water are:

| Compound | Concentration | Units |
|----------------------|---------------|----------|
| Chloroform | ≤300 | µg/liter |
| Bromoform | ≤100 | µg/liter |
| Dibromochloromethane | ≤100 | µg/liter |
| Bromodichloromethane | ≤60 | µg/liter |
| Trichloroethene* | ≤20 | µg/liter |

*Standard from the world health organization drinking water standard 2011 (Not technically a THM but is a frequently requested compound in conjunction with THM analysis.)

Trihalomethanes in potable water is a by-product of disinfection using chlorine and other disinfectants. The concentration of trihalomethanes in potable water needs to be monitored, as long term consumption of high concentrations can lead to chronic ailments.

The sample submitted **Steve-Tswete Doornkop 1** complies with the standards for trihalomethane content in drinking water.



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CERTIFICATE OF ANALYSIS

SCREENING FOR PHENOLIC COMPOUNDS

SAMPLE INFORMATION

| | | | |
|---------------|---|-----------------|-------------|
| DATE RECEIVED | 27-Sep-13 | LAB NUMBER | D219.D |
| CLIENT | Steve-Tswete | DATE ANALYZED | 4-Oct-13 |
| SAMPLE NAME | Doornkop 1 | MATRIX | Water |
| CONTAINER | Plastic | DILUTION FACTOR | No Dilution |
| INSTRUMENT | Agilent 7890A GC/MS, Headspace 7697A, Solid Phase Microextraction | | |

| COMPOUND | CONCENTRATION | UNITS |
|----------|---------------|-------|
|----------|---------------|-------|

| | | |
|---------------------------|-----|----------|
| phenol | <10 | µg/liter |
| 2-chlorophenol | <10 | µg/liter |
| 2-methylphenol | <10 | µg/liter |
| 3+4-methylphenol | <10 | µg/liter |
| 2-nitrophenol | <10 | µg/liter |
| 2,4-dimethylphenol | <10 | µg/liter |
| 2,4-dichlorophenol | <10 | µg/liter |
| 2,6-dichlorophenol | <10 | µg/liter |
| 4-chloro-3-methylphenol | <10 | µg/liter |
| 2,3,5-trichlorophenol | <10 | µg/liter |
| 2,4,6-trichlorophenol | <10 | µg/liter |
| 2,4,5-trichlorophenol | <10 | µg/liter |
| 2,3,4-trichlorophenol | <10 | µg/liter |
| 2,3,6-trichlorophenol | <10 | µg/liter |
| 2,3,4,6-tetrachlorophenol | <10 | µg/liter |
| 2,3,5,6-tetrachlorophenol | <10 | µg/liter |
| 3,4,5-trichlorophenol | <10 | µg/liter |
| pentachlorophenol | <10 | µg/liter |
| DINOSEB | <10 | µg/liter |

| | | |
|-------------------------|---------------|-----------------|
| TOTAL IDENTIFIED | <10 | µg/liter |
|-------------------------|---------------|-----------------|

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Results marked "***" concentration outside of calibration range, estimate only.


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CERTIFICATE OF ANALYSIS

TRIHALOMETHANE COMPOUNDS (THM)

| SAMPLE INFORMATION | | LAB NUMBER | D220.D |
|--------------------|--|---------------|----------|
| DATE RECEIVED | 27-Sep-13 | DATE ANALYZED | 2-Oct-13 |
| CLIENT | Steve-Tswete | MATRIX | Water |
| SAMPLE NAME | Doornkop 2 | | |
| CONTAINER | Plastic | | |
| INSTRUMENT | Agilent 7890A GC/MS, Headspace 7697A, Solid Phase Extraction | | |

| COMPOUND | CONCENTRATION | UNITS |
|----------------------|---------------|----------|
| Chloroform | <10 | µg/liter |
| Trichloroethene | <10 | µg/liter |
| Bromodichloromethane | <10 | µg/liter |
| Dibromochloromethane | <10 | µg/liter |
| Bromoform | <10 | µg/liter |

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Trihalomethane Result Interpretation

According to the South African National Standards 241-1: Ed1 2011 the limits for trihalomethane content in drinking water are:

| Compound | Concentration | Units |
|----------------------|---------------|----------|
| Chloroform | ≤300 | µg/liter |
| Bromoform | ≤100 | µg/liter |
| Dibromochloromethane | ≤100 | µg/liter |
| Bromodichloromethane | ≤60 | µg/liter |
| Trichloroethene* | ≤20 | µg/liter |

*Standard from the world health organization drinking water standard 2011 (Not technically a THM but is a frequently requested compound in conjunction with THM analysis.)

Trihalomethanes in potable water is a by-product of disinfection using chlorine and other disinfectants. The concentration of trihalomethanes in potable water needs to be monitored, as long term consumption of high concentrations can lead to chronic ailments.

The sample submitted **Steve-Tswete Doornkop 2** complies with the standards for trihalomethane content in drinking water.



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CERTIFICATE OF ANALYSIS

SCREENING FOR PHENOLIC COMPOUNDS

SAMPLE INFORMATION

| | | | |
|---------------|---|-----------------|-------------|
| DATE RECEIVED | 27-Sep-13 | LAB NUMBER | D220.D |
| CLIENT | Steve-Tswete | DATE ANALYZED | 4-Oct-13 |
| SAMPLE NAME | Doornkop 2 | MATRIX | Water |
| CONTAINER | Plastic | DILUTION FACTOR | No Dilution |
| INSTRUMENT | Agilent 7890A GC/MS, Headspace 7697A, Solid Phase Microextraction | | |

| COMPOUND | CONCENTRATION | UNITS |
|----------|---------------|-------|
|----------|---------------|-------|

| | | |
|---------------------------|-----|----------|
| phenol | <10 | µg/liter |
| 2-chlorophenol | <10 | µg/liter |
| 2-methylphenol | <10 | µg/liter |
| 3+4-methylphenol | <10 | µg/liter |
| 2-nitrophenol | <10 | µg/liter |
| 2,4-dimethylphenol | <10 | µg/liter |
| 2,4-dichlorophenol | <10 | µg/liter |
| 2,6-dichlorophenol | <10 | µg/liter |
| 4-chloro-3-methylphenol | <10 | µg/liter |
| 2,3,5-trichlorophenol | <10 | µg/liter |
| 2,4,6-trichlorophenol | <10 | µg/liter |
| 2,4,5-trichlorophenol | <10 | µg/liter |
| 2,3,4-trichlorophenol | <10 | µg/liter |
| 2,3,6-trichlorophenol | <10 | µg/liter |
| 2,3,4,6-tetrachlorophenol | <10 | µg/liter |
| 2,3,5,6-tetrachlorophenol | <10 | µg/liter |
| 3,4,5-trichlorophenol | <10 | µg/liter |
| pentachlorophenol | <10 | µg/liter |
| DINOSEB | <10 | µg/liter |

| | | |
|-------------------------|---------------|-----------------|
| TOTAL IDENTIFIED | <10 | µg/liter |
|-------------------------|---------------|-----------------|

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Results marked "est" - concentration outside of calibration range, estimate only.


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