

Cayman Water

Jan-Dec 2021 Water Quality Data

| Parameter | WAC MCL | US Federal MCL | WHO guideline MCL | System field samples | ACWW | West Bay | Major Sources |
|--------------------------------------|---------|-----------------|-------------------|----------------------|-------|----------|--|
| Microbiological contaminants | | | | | | | |
| Total coliform bacteria | 0 (a) | 5% (b) | 5% (c) | 0.0% | 1.6% | 1.6% | naturally present in the environment (f) |
| Faecal coliform bacteria | 0 (a) | N/A | 0 (a) | 0.0% | 1.6% | 1.6% | naturally present in the environment |
| Disinfection byproducts | | | | | | | |
| Total trihalomethanes (ppb) | N/E | 80 | 1000 | | 1.10 | 1.85 | by-product of drinking water chlorination |
| Disinfectants | | | | | | | |
| Chlorine, free residual (ppm) (d) | 0.2-0.5 | MRDL-4 | N/A | | 0.34 | 0.35 | water additive used to control microbes |
| Volatile organic contaminants | | | | | | | |
| 16 US regulated compounds | N/E | 62-550-310 (4a) | various | | U | U | various sources including industrial pollution |
| Inorganic contaminants | | | | | | | |
| Total dissolved solids (ppm) (d) | ≤200 | N/A | 1000 | | 151 | 157 | residual from desalination process |
| Hydrogen Sulfide (ppm) (d) | ≤0.01 | N/A | 0.05 | | 0 | 0 | residual from post treatment process |
| Copper (ppm) (e) | N/E | 1.3 | 1 | | <0.05 | <0.05 | corrosion by-product |
| Zinc (ppm) (e) | N/E | N/A | 3 | | 0.10 | 0.17 | corrosion inhibitor additive |
| Iron (ppm) (e) | N/E | N/A | 0.3 | | <0.05 | <0.05 | corrosion by-product |
| Sodium (ppm) (e) | N/E | N/A | 200 | | 53 | 60 | residual from desalination process |
| Chloride (ppm) (e) | N/E | N/A | 250 | | 89 | 97 | residual from desalination process |
| Other parameters | | | | | | | |
| pH (d) | 6.5-8.0 | N/A | < 8 | | 7.23 | 7.04 | adjusted to neutral (7) in finishing process |
| Conductivity (µS/cm) (d) | ≤400 | N/A | N/A | | 302 | 312 | is a function of TDS |

Notes

- a) No colony forming units in any 100 ml sample.
- b) The US Federal MCL for coliform bacteria must not show the presence of coliform bacteria in ≥5% of the monthly samples taken.
- c) The WHO MCL for coliform bacteria must not show the presence of coliform bacteria in ≥5% of the yearly samples taken.
- d) Average of all daily sample results for the year.
- e) From monthly overseas lab testing samples for the year.
- f) It is possible for samples to be contaminated from exterior sources during the sampling process such as the tap, the sampling personnel or sample containers.

US and WHO MCL's take this into account by setting an allowance for positive test results. WAC does not. CW resamples positive results the following day.

If the resample results are negative, CW deems the initial sample as compromised. CW however reports all positive samples whether deemed compromised or not in the percentage calculation.

Abbreviations

µS/cm micro-Siemens per centimetre

ACWW- Abel Castillo Water Works

MCL- Maximum contaminant level

MRDL- Maximum residual disinfection level

N/A- Not applicable

N/E- Not established

ppb- parts per billion

ppm- parts per million

U- below the detectable limit of the test method

WAC- Water Authority Cayman

WHO- World Health Organization