



Case Study

Food & Beverage Industry

10m³/h potable water treatment plant



Problem Statement

Mayo Macs' new off-grid facility relies on water from two boreholes, however this supply does not meet SANS 241:2015 drinking water standards as iron and salt levels are elevated. Bacteria levels are also high. The facility requires 200m³/day.

Solution

Watericon provided a water treatment plant that includes two sets of filters and two RO units. Each train can produce 5m³/h. The system is designed to run at full capacity or half capacity depending on the client's needs.

A filtration set consists of:

Maddox media – to remove iron and manganese

Glass media – to remove suspended solids

Carbon media – to reduce colour, remove organics & improve taste

The RO units consist of 4 RO membranes each with a feed blend valve to keep some minerals in the product water as a form of remineralisation. The product water is disinfected with sodium hypochlorite before going into the product tank before use.



Performance target

- Flow – 5m³/h
- Bacteria – ND
- EC < 500 uS/cm
- Turbidity < 1 NTU



Process

- Oxidation/Disinfection
- Multimedia Filtration
- Reverse Osmosis



Result

- Greater water security
- Lower energy use
- Reduced municipal dependence
- A system that can grow with production