



EXPLANATION FOR MICROBIOLOGICAL ANALYSIS

Heterotrophic (Standard) Plate Count (HPC)

The heterotrophic plate count is a procedure for estimating the number of live bacteria in water and is expressed as colony forming units per millilitre (cfu/ml). It is an indicator for the effectiveness of any treatment / disinfection regime in place. The guidelines, NHMRC and AWRC “Guidelines for Drinking Water Quality in Australia” (2004), recommend a risk management approach where system specific targets are set. This can be achieved on-site by maintaining a database of previous results, establishing the normal variations and setting appropriate targets. Based on MPL previous experience we recommend HPC should not exceed 1000 cfu/mL. The heterotrophic plate count in itself is NOT indicative of any health risk.

Total Coliforms

Total Coliforms were previously considered indicators of faecal contamination. The NHMRC and AWRC “Guidelines for Drinking Water Quality in Australia” (2004) do not consider Total Coliforms useful indicators of faecal contamination in the absence of *E. coli*, and have not proposed any guideline value for Total Coliforms. Like HPC, Total Coliforms can be used as an indicator for the effectiveness of any treatment program. Based on previous experience MPL recommend that Total Coliforms should not exceed 50cfu/100mL in the absence of *E.coli*.

Faecal Streptococci

Faecal *Streptococci* are a specific group of bacteria that are found in high numbers in both human and animal faeces and are therefore a valuable indicator for determining the extent of faecal contamination of a water source. It is particularly useful when used in conjunction with detection of Thermotolerant Coliform bacteria (see below). Levels of Faecal *Streptococci* are expressed as colony forming units per 100 millilitres (cfu/100ml). MPL Laboratories recommend that Faecal *Enterococci* should be less than 1 cfu/100ml.

Thermotolerant Coliforms/ *E. coli*

Thermotolerant Coliforms/ *E. coli* are considered the best indicators of faecal contamination in water. They are present in faeces in high numbers. The presence of Thermotolerant Coliforms/ *E. coli* in water is unacceptable and indicates that a major health risk exists. Levels of Thermotolerant Coliforms/ *E. coli* are expressed as colony forming units per 100 millilitres (cfu/100ml). NHMRC and AWRC “Guidelines for Drinking Water Quality in Australia” (2004) recommend that levels of *E. coli* should be less than 1 cfu/100ml.