

Australian/New Zealand Standard™

Water microbiology

Method 3.2: Heterotrophic colony count methods—Plate count of water containing biocides

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee, FT-020, Water Microbiology, as part of a series of methods for the microbiological examination of waters for domestic and industrial use.

The objective of preparing this Standard is to establish a standard method for the examination of water containing biocides for which there is no available neutralizer, excluding treated drinking water, for total bacterial count.

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

FOREWORD

Waters of all kinds contain a variety of microorganisms derived from various sources and estimation of their overall number can provide useful information for assessing and monitoring water quality. Microorganisms which are able to survive in water usually grow better in the laboratory at about $21 \pm 1^\circ\text{C}$ than at higher temperatures, the results often reflecting the environmental and seasonal conditions prevailing at the time. In contrast, microorganisms which grow well at $36 \pm 1^\circ\text{C}$ generally survive with difficulty in water. They are more likely to have come from other sources, which may imply poor standards of hygiene.

For these reasons, separate plate counts are usually made of microorganisms which are able to form colonies at $21 \pm 1^\circ\text{C}$ and at $36 \pm 1^\circ\text{C}$. For cooling tower waters, generally plate counts are undertaken at $36 \pm 1^\circ\text{C}$.

Waters which may contain biocides, e.g. cooling tower waters, require a modification of procedures to eliminate possible interference with counts.

In samples of water where an unidentified biocide may be present or where effective neutralization is not available it is necessary to use dilution of the sample to minimize interference with counts by the biocide.
