

Report No DWI0783

Survey of the Microbiological Quality of Bottled Waters

DWI0783

May 1996

Executive Summary

A total of 1082 bottles of still natural mineral and other bottled water, comprising 17 different brands, were purchased from a variety of retailers around the Midlands and North West.

Samples were analysed for total colony counts at 37°C and 22°C, total coliforms, *E. coli*, *Pseudomonas aeruginosa*, aeromonads, faecal streptococci and sulphite-reducing clostridia according to the standard methods outlined in Report 71 (HMSO, 1982 and 1994) and were examined for compliance with the Natural Mineral Water Regulations 1985 and the Drinking Water in Containers Regulations 1994.

No samples were found to contain *E. coli*, faecal streptococci or aeromonads, one sample contained sulphite reducing clostridia, four samples contained total coliforms and 13 samples contained *Ps. aeruginosa*. There was little difference in the percentage of failures between natural mineral water and other bottled water.

Significantly lower (37°C) colony counts were measured in natural mineral water samples when compared with other bottled water (commonly called 'spring' water) samples.

Overall, container type (i.e. clear plastic versus coloured plastic versus glass.), was found to affect the microbiological quality of the water, with clear materials yielding lower colony counts than coloured materials. Overall, glass was found to produce lower colony counts than plastic, although there was an individual exception to this, with significantly higher colony counts recorded from one brand of water stored in clear glass than in clear plastic.

Large variations in colony counts, at both 22°C and 37°C, were seen at different sell-by dates, and no consistent pattern emerged.

Copies of the report are available from FWR, price £15.00, less 20% to FWR Members.