

VARIABILITY OF CERTAIN MICROBIOLOGICAL AND ENVIRONMENTAL  
WATER QUALITY INDICATORS IN COASTAL RECREATIONAL WATERS  
OFF THE WEST ISTRIAN COAST, YUGOSLAVIA

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In the Northern Adriatic, which can be taken as fairly representative for the Mediterranean coastal waters off European coast, the short and long term variability of selected microbiological water quality indicators and the reproducibility of their measurements was tested. The validity of various parameters in assessing the recreational quality of coastal waters is discussed.

Using techniques which provide satisfactory reproducible and reliable results on the concentration of total coliforms, fecal coliforms and fecal streptococci, the membrane filter and the multiple test tube methods were compared. It was confirmed that the results obtained by these two methods are not directly comparable.

The short term fluctuation of the same microbiological parameters was tested by sampling at 3 hour intervals.

Long term variability of selected water quality indicators was studied at 11 fixed stations spread along

the coast in the vicinity of Rovinj. The variations observed in the concentration of microbiological parameters spanned about 3 orders of magnitude but no seasonal regularity was detected.

The only strongly positive correlation between the various environmental parameters measured was that between total and fecal coliforms at stations contaminated with fecal material.

The dangers of drawing conclusions on the general recreational quality of coastal waters based on a few measurements of often irrelevant environmental parameters is discussed.