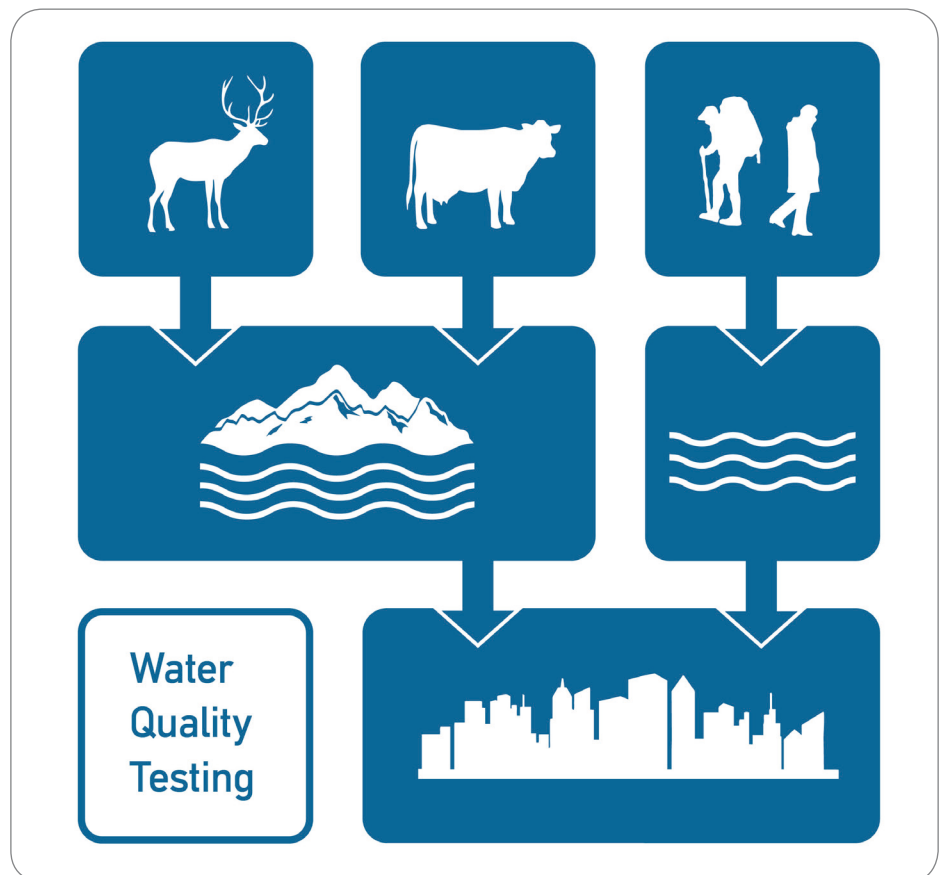


Water quality Tests

Quantification and origin identification of faecal contamination

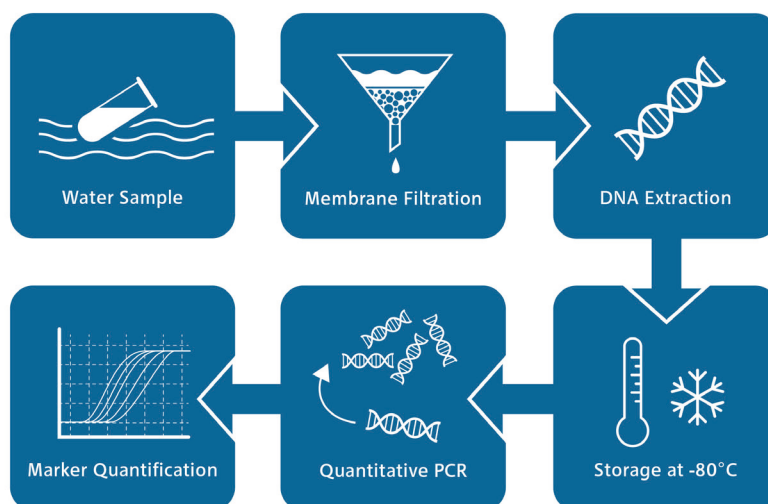
Faecal pollution of water resources exposes consumers to health risks all around the world. The investigation of traditional faecal indicators such as *Escherichia coli* (*E. coli*) and enterococci are able to detect faecal pollution but do not provide any information about the contamination source which might be human waste water or non-point sources like grazing livestock or wildlife. The identification and apportioning of the source of faecal contamination allow improved catchment management and improved protection of water resources (microbial source tracking - MST).



New Solutions

The new technology is based on the molecular biological detection of faecal genetic markers specific for human and ruminant sources, respectively. The markers are detected by highly sensitive quantitative real-time PCR assays with detection limits in the range of nanograms to picograms of fresh faecal material per inves-

tigated volume of water. The technique is highly specific for the respective source groups. The method is quantitative allowing comparison and correlation to classical faecal indicator counts or other water quality parameters. It has been tested and applied in numerous studies across Europe, the US, Asia and Oceania.



Applications

Environmental diagnostics and microbial faecal source tracking in water quality analysis, water resource management and quantitative risk assessment in the context of Water Safety Plans.

Benefits

The method allows specific detection of ruminant and human faecal pollution. It is:

- 10-100 x more sensitive than E.coli
- highly specific for respective faecal sources
- quantitative, standardized, fast and reliable
- cultivation independent
- inexpensive and cost effective

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