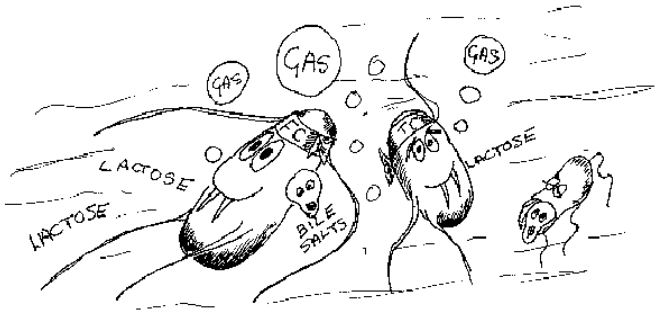
Coliform Tests,
Comparison with the T-COLI-BART system.



Coliform bacteria are defined by the fact that many of them inhabit the intestine; cause a range of diseases from diarrhoea, to dysentery, typhoid fever and a range of other infections. Since the start of the twentieth century, the presence of coliform bacteria in water has been considered to indicate that there is a hygiene / health risk to the user of that water. Testing for these bacteria has become more sensitive than for other bacterial groups and there is now commonly a zero tolerance for even one coliform bacterium in 100mL of water. There a number of tests that are in common use involving selective chemical that generate colors when the coliforms are active, the generation of colonies of distinctive types when grown on agars or filter materials, and the generation of gas. This latter technique was common through to the 1980s but has now been superseded by sensitive color reactions. All of these tests take 24 hours and commonly the use of blood heat for incubation. T-COLI-BART™ system uses the fermentation approach to detecting the coliform bacteria but without the dilution (a feature of the most probable number method, MPN). Here the 100mL sample is added directly to the tester which is then incubated in a reader. When gas is produced a dense plastic device floats up buoyed by the gas. As the device (D thimble™) floats up produced by the coliform bacteria in the sample. it triggers an infra red light that then determines the time lag in seconds. The larger the coliform population in the sample the sooner the D thimble comes up (normally in 20,000 to 80,000 seconds). Time taken to set up the test is less than five minutes and the operator is informed as soon as a positive detection has occurred. Other tests commonly have to be in a laboratory setting with careful controls. T-COLI-BART is a system that can be used in the field by trained certified operators and generates results in less than one day. Here the tester is actually recycled by return to DBI for sterilization and recycle.