

## Rapid diagnosis of food-borne bacteria

The emergence of food-borne bacteria such as *Campylobacter*, *Staphylococcus aureus*, *E. coli*, *Shigella* and *Listeria* as major health threats is causing concern in food markets. Effective management of such outbreaks relies on rapid identification of the pathogen responsible for the disease. The Picosorb System, developed at the Bangor INTEC Centre, is specifically meant to provide a totally automated, time- and cost-saving analysis of semi-solid material that is suspected of harbouring such bacteria.

The system contains a programmable workstation called the BactiProbe and a conveniently packaged cartridge system called PicoPak. It has better rate of success in detecting the bacteria than agar plate methods, and the testing turnaround time is much less, while the cost of testing is reduced by about 20 per cent of the current PHLS cost. The danger to technicians of exposure to pathogen is eliminated. The workstation has a maximum capacity of 32 cartridges, each cartridge being dedicated to one sample and able to assay up to four different organisms. The system has been designed to be as open as possible so that any appropriate reagent can be employed. The reagents are simply dropped into the appropriate slot using disposable syringes. Samples to be tested are mixed with an appropriate enrichment broth and introduced into the PicoPak disposable cartridge for analysis. The temperature of the cartridges can be controlled and correspond to those most commonly used in incubator systems – 28°, 37°, 40° and 42°C. Fast changes in temperature in one part of the PicoPak, up to 95°C, will allow PCR amplification of nucleic acid to be undertaken for slow-growing bacteria. *Contact: Mr. Barry Jones, Marketing Manager, Picosorb, Snowdonia Business Innovation Centre, Parc Menai, Menai Bridge, Bangor LL57 4 BF, Wales, the United Kingdom. Tel: +44 (0) 1286 674806; E-mail: bjones@picos.fsnet.co.uk.* (Advances Wales, Issue 33, 2001)