



## Application Note 7

# Speedy Breedy® in Agritech

Author: Derek Price      Date: September 2014

Speedy Breedy®: the world's most versatile portable contamination test Speedy Breedy® can be used in a wide range of Agritech applications that include:

### Testing yeast quality prior to bio-ethanol production

The quality of the active yeast introduced into bio-ethanol fermentations can affect the quantity of ethanol produced from raw materials with important commercial implications on profitability within these large industrial processes. Speedy Breedy® can analyse the quality of yeast in three hours meaning that timely adjustments can be made to processes for best efficiency.

### Testing feed stock for anaerobic digesters

The composition and quality of feed stock to AD plants can significantly affect the amount of Methane produced so it is important to add a consistent, adequate quality food source. Using inoculum from the digester, Speedy Breedy® can test feed stock in small volumes prior to addition to the AD plant with the aim of improving methanol yield.

### Testing for contamination in process water used to wash salad and other vegetables

Speedy Breedy® has a range of thirteen general and specific media and protocols suitable for testing contamination in food processing water and other industrial process water applications. The range includes tests for common marker organisms such as E. coli, Coliforms, Salmonella, Listeria and TVC, all of which can be tested on site without a laboratory so as to reduce time, save money and increase shelf-life.



### Testing for campylobacter in chicken processing

Campylobacter is a leading cause of enteric disease in most developed countries and is endemic in many poultry populations. Reducing the incidence of human infection by reducing Campylobacter on the fowl means monitoring flocks and processing plants, plus the final product. Speedy Breedy® can detect Campylobacter under laboratory conditions and a test is under development for a point of sample method.



### Testing for contamination in animal semen

Artificial insemination of domesticated animals is used to prevent venereal disease however it also has the potential to spread infectious disease. Speedy Breedy® can be used to monitor sterility in high value animal semen which is often transported both nationally and internationally.

### Testing for contamination in animal feed and water

The control of bacteria such as Salmonella in animal feedstuffs is important to protect the human food chain where contamination can be transmitted from animal feeds to animals, and onward to human food products. Other contaminants can infect animal populations, with important commercial implications due to loss of health and poor conversion of food to product.

### Environmental testing in Food production facilities

HACCP (Hazard Analysis and Critical Control Point) is a system that helps food business operators look at how they handle food and introduces procedures to make sure the food produced is safe to eat. Speedy Breedy® can be used as part of HACCP to monitor hygiene and microbial contamination levels at the critical points in the process. Since the tests can be performed on-site without a laboratory, tests are very fast so product can be quickly passed as safe or remedial action can be taken.



### Testing for contamination in milk and milk processing facilities

Although milk is largely sterile when first drawn there are many ways it can become contaminated. Speedy Breedy® can be used to test milk at multiple stages of the production process including effectiveness of pasteurisation process and shelf-life. Common problem organisms are Listeria, Campylobacter and Salmonella.

