



Improving the safety of bivalve shellfish

Viral contamination of bivalve shellfish is a major food safety concern. Suppliers and retailers need to be sure the products they place on the market are safe. CEFAS is a World Leader in novel techniques to detect viral pathogens that help shellfish suppliers and retailers produce a safer product and avoid disease outbreaks.



QUALITY CONTROL OF BOTH SOURCE AND
PROCESSED PRODUCTS

ASSESSMENT OF VIRAL CONTAMINATION IN
HARVESTING AREAS

VALIDATION OF VIRAL REMOVAL DURING
TREATMENT PROCESSES

OUTBREAK INVESTIGATION

APPLIED RESEARCH IN SHELLFISH HYGIENE

The problem of virus contamination

Filter-feeding bivalve shellfish (eg oysters, clams, mussels and cockles) can present a consumer health risk if grown in sewage polluted water: Contamination from viral pathogens can cause illnesses such as gastro-enteritis and hepatitis.

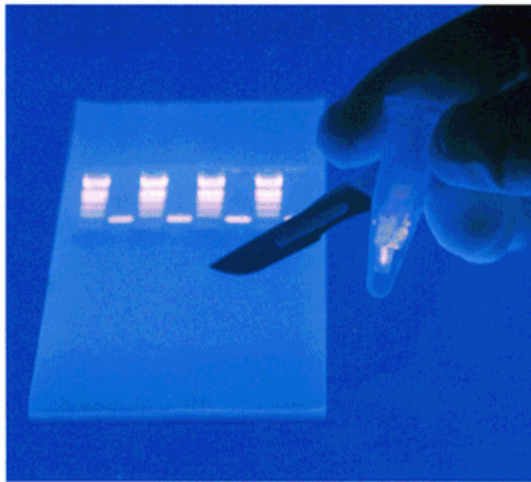
Until recently no methods existed to detect viral pathogens in shellfish. Suppliers and retailers had to rely on the

presence of faecal bacteria (such as *E.coli*) to indicate a potential health risk. Such indicators are now known to be inadequate. Many outbreaks of infectious viral disease have been caused by bacteriologically 'clean' shellfish.

New tools offer an alternative approach

CEFAS Weymouth has developed novel viral test procedures which can be used to help produce a safer product. Using cutting edge molecular biology techniques we can detect human viral pathogens, such as those responsible for gastro-enteritis, in shellfish. We have also developed alternative 'viral' indicator organisms for rapid and reliable prediction of such viral hazard in shellfish.

CEFAS has pioneered the development of these approaches and is now a world leader in the technology and its application.



Helping you to provide safe products with our leading edge technology and long-standing expertise

Our newly developed techniques are combined with over 50 years experience in shellfish hygiene issues to provide a comprehensive service which includes:

Product quality

- Monitoring pre-processed product to source from the safest sites
- Monitoring processed 'end product' ready for sale to the consumer
- Assistance in the development of quality policies and monitoring audits

Treatment processes

- Assessment of efficiency of treatment processes such as purification, relaying and heat treatment for reduction of virus risk
- Advice on maximising virus removal during processing
- Validation of new treatment systems

Outbreak investigations

- Testing implicated shellfish batches for viral indicators and pathogens
- Monitoring implicated harvesting areas for viral contamination
- Epidemiological investigations using sequence analysis

Applied R&D tailored to customer requirements

We have a unique combination of world leading shellfish hygiene expertise, extensive research experience and outstanding laboratory facilities including experimental aquaria. We can undertake applied R&D tailored to customers requirements in areas such as:

- investigating and improving techniques for virus removal during shellfish purification and relaying,
- investigation of environmental factors affecting contamination of shellfish with pathogens,
- the development of management policies to minimise viral problems.

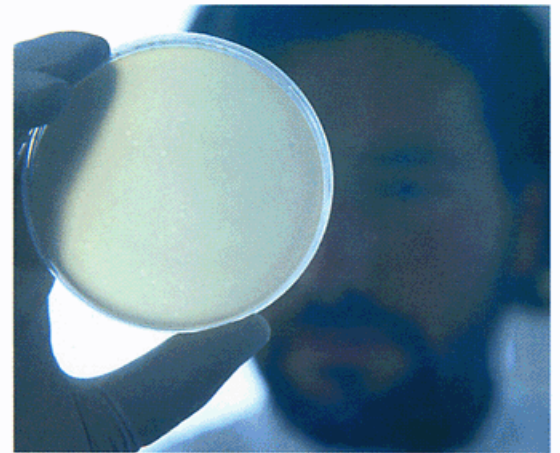
Reliable, responsive and high quality service

CEFAS is an internationally renowned centre of excellence for research, assessment and advice on fisheries management and environmental protection.

All of our work is conducted under formal quality policies.

Our commitment to customer satisfaction ensures our service is

- Rapid and responsive
- Impartial and confidential



For further information about any of our services or to discuss your needs with one of our specialists please contact



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