



"Poetry is just the Evidence of Life"

Leonard Cohen Poet and Songwriter

poetri Point of Entry Testing Rapid Immunoassay



The advent of modern food processing technologies has dramatically increased the number of food related illness. In the USA the Centers for Disease Control and Prevention (www.cdc.gov) reported at least 19,000 food related infections in 2013, with some 4,200 cases requiring hospitalization and some 80 fatalities. Similar trends have been reported elsewhere with examples of some 8,300 reported Salmonella infections in the UK (population 63 million) in 2012 and 1,131 cases in Denmark (population 5.5 million) in 2013. Similar statistics are also available for other food borne pathogens such as Camplyobacter. It is estimated that the reported cases of food related infections are just a small fraction of the total number of cases of food-related illnesses.



With modern food processing systems and the rapid distribution of food stuffs, quality control of raw materials and finished processed food is vital in ensuring that contaminated food does not enter into the food chain.

In the USA, the USDA Food Safety and Inspection Service (FSIS, www.fsis.usda.gov) has announced new plans to combat such contamination at the site of production. Similar plans have also been announced in the EU.

However, even with modern and sensitive detection technologies such as real-time PCR, detecting pathogens such as Salmonella and Campylobacter is still very slow, as the samples must be pre-cultured for at least 24 hours before testing may begin. This leads to delays in being able to release finished food products for sale – with enormous economic consequences for the food manufacturing companies.

The total costs of food related illness are estimated as being in excess of USD 75 billion annually – a figure which includes medical expenses, loss of income, etc. (http://www.foodsafetynews.com/2012/01/foodborne-illness-costs-77-billion-annually-study-finds/#.U5V-JShO4V8)

The most obvious route to ensuring safer foods is to prevent the introduction of the pathogens into the food processing environment, as once present the contamination can be very difficult and expensive to eradicate. However, this requires introduction of new technology that may be used at the Point of Entry in the food processing facility.





poetri - a novel, rapid and effective test system

The German company *aokin* AG, located in Berlin, Germany and comprised of a worldclass group of American and German researchers has developed a rapid, point-of-entry test system that can be used to distinguish between safe or contaminated supplies of raw materials before they enter the food processing facility.

Centred around a patented technology platform, the fluorescence polarization immunoassay allows for tests to be performed in just a few minutes, with minimal sample preparation and no pre-culture. The company has already developed tests for mycotoxins and other food-borne fungal contaminants and these are being used by food processing companies in Europe and the USA.



This award winning technology platform has already been recognized by the German authorities as a major breakthrough in food testing and the platform has applications in other fields such as clinical diagnostics.

Easy-to-use, these tests do not require a dedicated laboratory and may be performed by almost anyone. Training on the system and tests can be performed in a short period and thus serve two purposes – minimal interference with established manufacturing procedures and prevention of site contamination by food-borne pathogens. The tests are fully validated and, where appropriate, accredited as approved methods by the relevant authorities.

By performing these critical tests at the Point-of-Entry, the company can benefit by reduced manufacturing costs, as raw materials do not need to be quarantined for lengthy periods prior to final QC release.





A proven technology – taking food testing into the 21st. century

Application of *aokins* patented and validated technology in the field of bacterial pathogen testing represent a major step forward in food testing methods. The company has identified a method of detecting contamination of foodstuffs by Salmonella and Campylobacter that would eliminate the requirement for pre-culture, thus reducing the time required for testing from more than 24 hours to just a few minutes.

The world's biggest market for such tests is in the USA and to develop tests and complete the necessary USDA accreditation of these tests requires additional funding. It is estimated by the company that there is a requirement for funding of approximately USD 1.5 million, which will be matched by a business development grant from the German Government.

The company has an extensive network of technically qualified distributors and partners – including the USA and thus is in an excellent position to consolidate its position as a world leader in rapid food testing.

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