15 ANS DE R&D POUR L'INNOVATION DES ENTREPRISES

XTRALYZ®
Rapid microfluidic DNA extraction technology for food safety

An application together with test protocols for rapid detection of pathogenic bacteria for the food industry and other sectors such as water and the environment, have been developed within the framework of the Direct project carried out by the Carnot CEA Leti DTBS unit (Department of Biology and Healthcare Technologies).

Institut Carnot CEA LETI

Scientific / technological breakthrough

The Direct project is developing a rapid microfluidic DNA extraction consumable to speed up bacteria detection. This solution will be used in the food safety testing market to detect bacteria, including pathogens: Listeria, Salmonella and E. coli (90% of tests), in liaison with agri-food companies. This breakthrough DNA extraction solution differs from the existing commercial devices being marketed by major PCR equipment manufacturers in its speed and simplicity.
The Direct Analysis test detects the presence of contamination within six hours with a sensitivity of one bacterium in 25g of a sample (AFNOR standard), whereas current tests require 22 to 48 hours.

Competitive advantage for the economic stakeholders

With Direct Analysis, agri-food businesses get results in real time, detect the origin of contamination more quickly and gain a whole extra day of shelf life, representing a significant financial gain in terms of storage costs, logistics, product recall costs and productivity.
This solution is easy to use and there are no barriers to installation among users, as demonstrated by initial in situ proofs of concept (on a food production line).

Partnership

- **DIRECT ANALYSIS SAS** aims to become a world leader in the development and distribution of DNA extraction solutions.

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