

biomode®



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What we do?

At Biomode

We develop Rapid Diagnostic Kits for
pathogen detection by
applying the Peptide Nucleic Acid
FISH Technology



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How we do it? PNA FISH



TARGET

Bacterial rRNA

Identification of unique
rRNA sequence of the
target bacteria

PROBE

PNA Probe Molecule

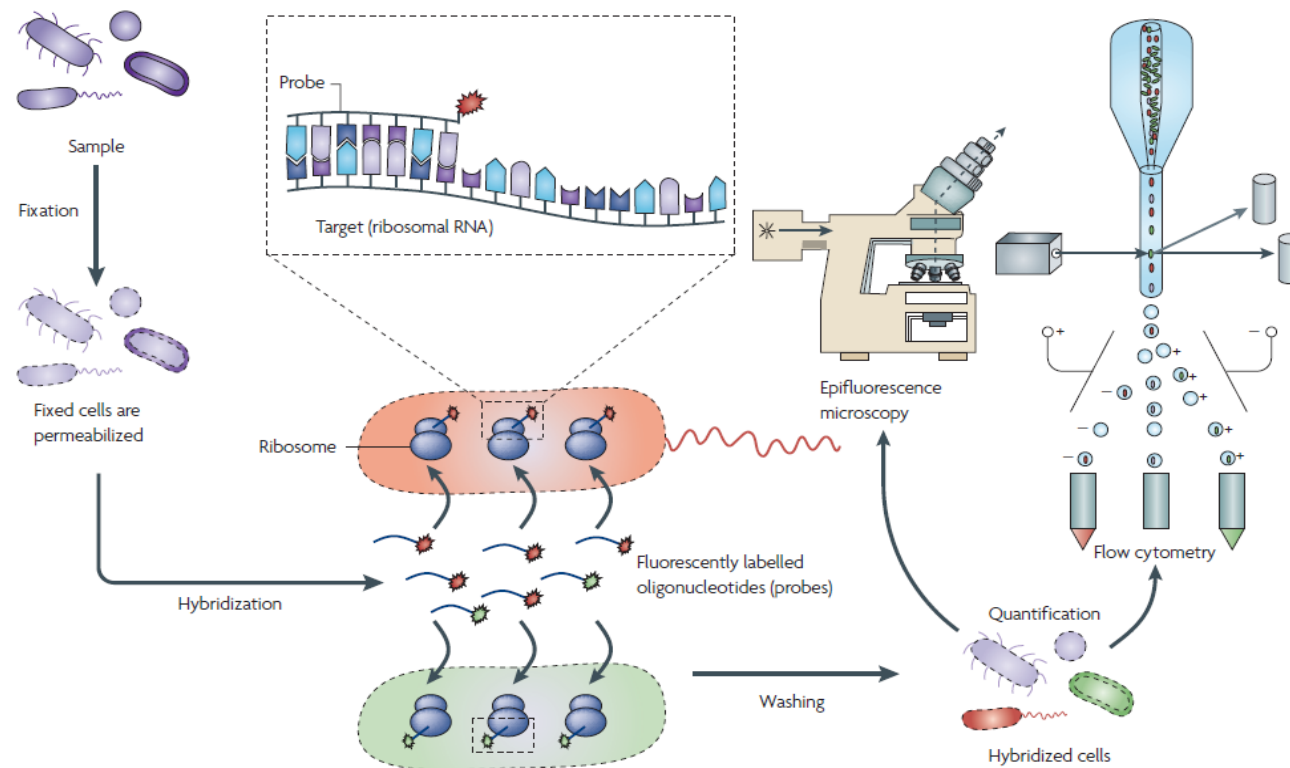
Design of specific PNA
probes complementary
to the target RNA

HYBRIDIZATION

Probe + Target rRNA

Fast binding to
the targeted pathogen
emitting a fluorescent
signal

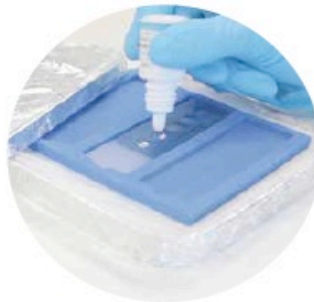
3 Technology 4 Steps



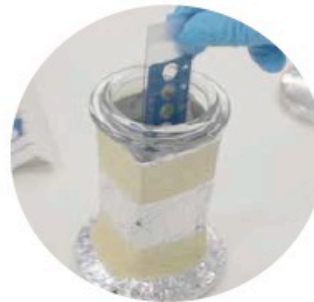
4 Technology 4 Steps



Step 1
Fixation



Step 2
Hybridization



Step 3
Washing



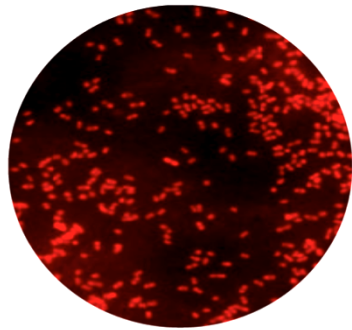
Step 4
Visualization

Results in less than 3 hours*

*After a pre-enrichment step

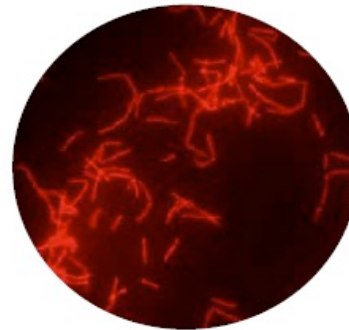


5 Outcome




Probe4Salmonella

Identification of *Salmonella* spp.
Limit of detection: 1 CFU/25g of sample



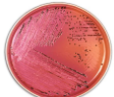



Probe4Monocytogenes

Identification of *Listeria monocytogenes*
Limit of detection: 1 CFU/25g of sample



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Advantages PROBE4SERIES

	 Culture	 Immunoassay	 PCR	 PNA-FISH
Price	✓	✗	✗	✓
Accuracy	Uncommon Patterns	Cross-reactivity Matrix Interference	Inhibitory compounds	✓
Speed	4 to 7 days	2 days	1 day	1 day
Ease-of-adoption	✓	Complex	DNA Extraction Complex	✓
Coverage	✓	✗	✓	✓

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Food Safety Products

- **Probe4Cronobacter**

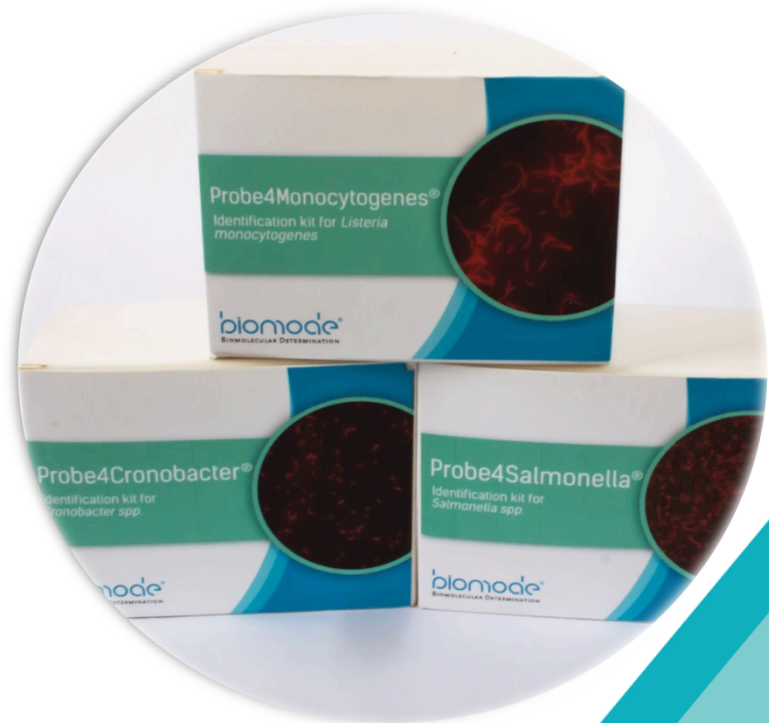
Detection of *Cronobacter* spp.
in Powder Infant Formula

- **Probe4Salmonella**

Detection of *Salmonella* spp.
with 100% specificity and sensitivity

- **Probe4Monocytogenes**

Detection of *Listeria monocytogenes*
with 100% specificity and sensitivity



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Food Safety Products

- Probe4Cronobacter

Detection of *Cronobacter* spp.
in Powder Infant Formula

- Probe4Salmonella

Detection of
with 100%

- Probe4

Detection of
with 100% spe

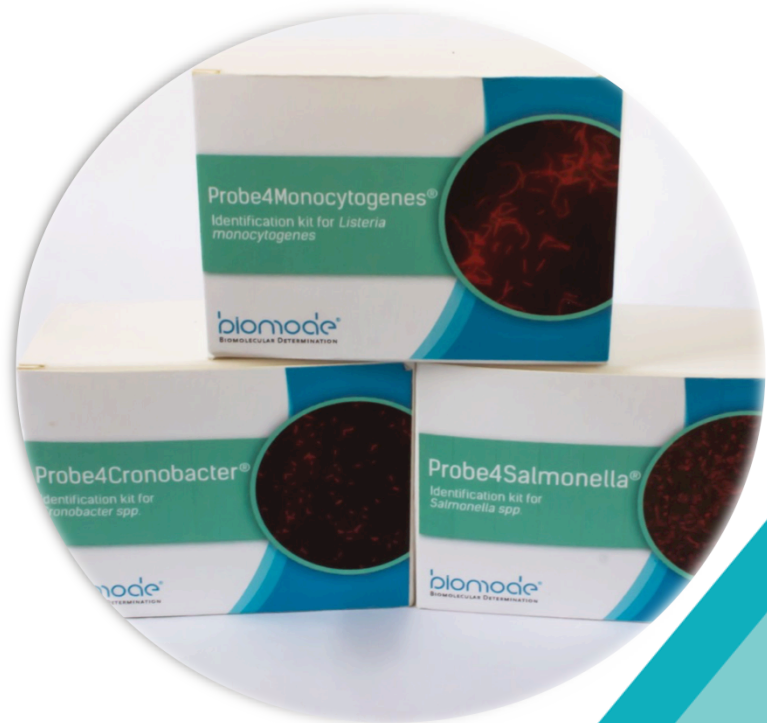


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Food Safety Products

- Probe4EcO157
- Probe4Vibrio
- Probe4Campylobacter


Products under development





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Other Products Services

- Health Sector – Probe4Pylori (detection of *H. pylori* and its clarithromycin resistance profile in gastric biopsies)
 - Custom made solution for pathogen detection (under an IP agreement)
 - Kits for research use only (more cost effective than those complying with IVD regulations)
 - Different versions of the products: for microscopy or for flow cytometry
 - FISH solutions ready to use
 - Production under ISO 13485
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