

BIOSENSOR

INO has developed a biosensor able to fill various detection and diagnostic needs for the medical, military, food, and environmental industries. INO's biosensor is a compact, low-cost protein microarray system that is based on LED illumination and able to identify and quantify multiple microbial pathogens simultaneously. The system is very attractive as a technology platform for rapid, simple, and low-cost screening of multiple microbial pathogens in foods in a single test. INO's prototype is easily adapted to other applications based on bacteria detection and quantification.



Illustration of the commercial instrument

TYPICAL CHARACTERISTICS

- . Multiplex detection and quantification of pathogenic bacteria
- . Detection of 10⁵ CFU/ml of *Salmonella*
- . Detection of 10 CFU of *Salmonella* in 25 g of ground chicken
- . No cross-reaction
- . Compact, simple, and fast
- . Low cost

COMPARATIVE TABLE OF THE MAIN TECHNOLOGIES USED TO IDENTIFY PATHOGEN ORGANISMS

DETECTION TECHNOLOGY	MAIN FEATURES		PRICE
	SENSITIVITY	MULTIPLEX DETECTION	
INO Cell Optical Reader	++	Yes	\$\$
DNA Microarray Reader	+	Yes	\$\$\$
PCR	++	Yes	\$\$\$
ELISA	++	No	\$\$

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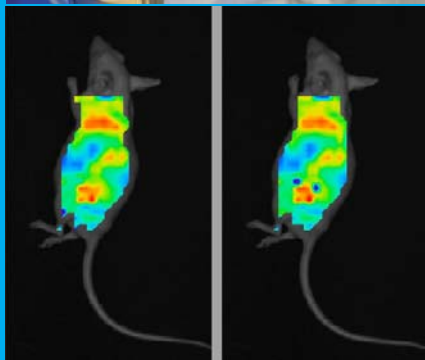


CHALLENGING LIGHT
FOR OUR PARTNERS

BIPHOTONICS

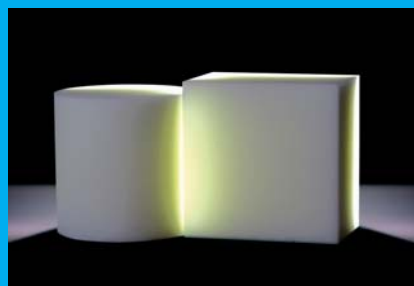
INO is a world-class R&D center specializing in optics and photonics with over a decade of success in developing innovative biophotonics solutions. INO harnesses the full power of existing technologies and develops new ones where necessary to provide its clients with unique solutions to their problems from concept to short-run production.

INO has successfully overcome the highly scattered nature of biological media, as evidenced by projects such as a near-infrared imaging system for optical mammography. Our biophotonics program has grown from this solid base in diffusion techniques to encompass other bio-spectroscopy techniques such as fluorescence and polarization.



OUR STRENGTHS

- . Expertise in
 - _ Biospectroscopy
 - _ Microfabrication
 - _ Specialty optical fibers
 - _ Micromachining
 - _ Tissue-simulating phantoms
- . Cutting-edge facilities
- . Containment level 2 laboratory



OPTICAL PHANTOM

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LEADING AHEAD

Harnessing the interaction of light with biological matter is not a new idea. INO recognized early on that bringing various fields together would enable the development of biophotonics solutions to concrete problems in the agrifood, health, and environmental sectors. This recognition along with advances in optical technologies has resulted in the continued growth of biophotonics applications.