

Glossary of Terms

2022 CPS Research Symposium

Terms	Definition
Bacteriocins	Bacteriocins are a group of antimicrobial compounds produced by bacteria that can be used as food preservatives to control foodborne pathogens.
Bacteriophages	Bacteriophages (or phages), are viruses that specifically infect bacteria. They are ubiquitous in the environment and are recognized as the most abundant biological agents on earth and they play major roles in the ecological balance of microbial life.
Blue light	A color in the visible light spectrum that has short wavelength and produces higher amounts of energy than other visible light colors. The blue light ranges between 400 and 490 nanometers of the visible spectrum of 380 to 700 nanometers.
Biofilm	Community of bacteria enclosed in a self-produced biopolymer matrix that adheres to a biotic or abiotic surface.
Coliphages	Bacterial viruses specific to <i>Escherichia coli</i> and other coliforms use as viral indicators. Coliphage-based detection methods can be used for microbial contamination tracking.
Exponential Growth Rate (EGR)	Exponential growth is a pattern of data that shows an increase over time by creating a curve of an exponential function.
Human norovirus	Viruses transmitted through the oral-fecal route and the main causative agents of gastroenteritis in the United States.
IR	Infrared
Photosensitizer	A chemical compound that enhances the effect of light on a living organism.
Protective cultures	Bacteria that have been specifically selected for their ability to inhibit the growth of pathogenic organisms or microbiological spoilage agents, and have GRAS (generally regarded as safe) status. The protective cultures are preparations consisting of live microorganisms (pure cultures or culture concentrates) that are added to foods for their antimicrobial effects through the production of specific metabolites such as organic acids (lactic, acetic and propionic acids).
RT-qPCR (Reverse transcription real time polymerase chain reaction)	The method used for quantification when the starting material is RNA. In this method, RNA is first transcribed into complementary DNA (cDNA) by reverse transcriptase. Then, the cDNA is used as the template for the qPCR reaction.
SBIR	Smartphone-based infrared
TI	Thermal imaging
Virus surrogate	Organism, particle, or substance used to study the fate of a viral pathogen in a specific environment. Surrogates are selected based on their morphological and physico-chemical similarities as well as are easily cultured in the laboratory.