

Quality Control and Testing in Food Processing As we aim for safer, healthier, and more sustainable products, the need for quality control and testing in food processing has grown steadily. The techniques mentioned above, including chromatography, mass spectrometry, spectroscopy, microscopy, and PCR, are just a few examples of the many analytical techniques used in food analysis and can help food processing experts produce high-quality and safe food products in Montreal and other regions around the world. HPLC is ideal for separating and quantifying organic compounds in food, such as amino acids and vitamins. MS can detect trace amounts of toxins or chemicals that can negatively affect the quality of food products and pose risks to consumers. UV-Vis spectroscopy is commonly used to assess the quality of fruits and vegetables based on their pigmentation. The method involves passing a sample through a stationary phase, which separates and purifies the compounds based on their chemical characteristics. GC is used to separate, identify, and quantify volatile compounds in food, such as fatty acids and flavors.

o PCR: PCR (Polymerase Chain Reaction) is a molecular biology technique used to amplify small DNA fragments present in a food sample. PCR is used to detect and quantify specific DNA sequences of microorganisms or foodborne pathogens present in a food sample. Food analysis plays a critical role in ensuring that food products are safe, authentic, meet regulatory requirements, and meet specific quality standards. With the rise of new technologies, the methods and techniques used in food analysis have also evolved and improved.