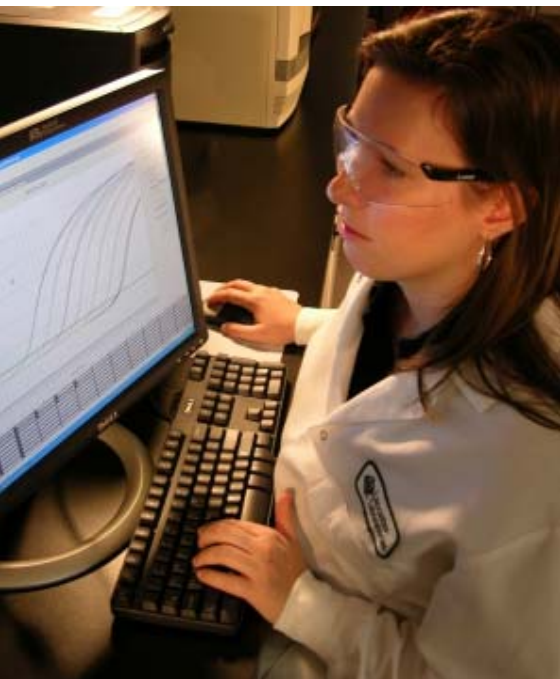


Polymerase Chain Reaction (PCR)



With an ever-increasing demand for purity in pharmaceutical products, the identification of biological contaminants during the manufacturing process is an important consideration. Testing a product for bacterial, viral, and host cell DNA is a required part of any biosafety plan.

Lancaster Laboratories can help ensure the safety and efficacy of biopharmaceutical products using PCR-based technologies. PCR is a powerful technique that offers the ability to detect adventitious agents and residuals at higher sensitivity and greater specificity than other molecular biology platforms. This is due to the nature of the PCR amplification process, which is theoretically capable of amplifying a gene of interest up to a trillion-fold over the course of one test. PCR is a fast and cost-effective alternative to other detection methods.

Lancaster Laboratories is able to offer the advantage of quantitative PCR (qPCR), a fast, reliable, and efficient method that can determine exact amounts of genomic material in biopharmaceutical samples. Lancaster Laboratories uses qPCR systems from Applied Biosystems and performs all testing under cGMP conditions. Both absolute and relative quantitation methods are available. Our expert scientists can help with the design of your project, including the synthesis of custom primers, as well as assay development and PCR validation methods. Sample extraction and data analysis are included as part of our service.



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Applications of PCR include:

- Residual DNA Analysis
- Viral DNA Identification
- Mycoplasma Testing
- Drug Response Analysis
- Gene Expression and Distribution Analysis

For more information on PCR or any of our pharmaceutical capabilities, please contact your project manager or Pharmaceutical Business Development at 717-656-2300.