



Layer Chromatography) are employed to separate reaction components and quantify substrate turnover or product formation. These assays are valuable for studying complex enzymatic pathways and identifying reaction intermediates.

Electrochemical assays: Electrochemical methods involve measuring changes in electrical properties resulting from enzymatic reactions. These assays offer rapid detection, high sensitivity, and real-time monitoring capabilities, making them suitable for point-of-care diagnostics and environmental monitoring [7].

Applications across disciplines

Enzyme assays find applications across diverse scientific disciplines, ranging from basic research to industrial processes and clinical diagnostics.

Biological research: Enzyme assays are indispensable tools for studying enzyme function, regulation, and metabolic pathways in living organisms. They enable researchers to dissect complex cellular processes and unravel the molecular basis of diseases [8].

Drug discovery: Enzyme assays play a pivotal role in drug discovery and development by facilitating the screening of compound libraries for potential therapeutic agents. They aid in identifying enzyme inhibitors or activators with therapeutic potential and assessing their efficacy and safety [9].

Biotechnology: