

# iChem Workflow: Current advancements in automation and future hurdles

## Present Landscape

At present, there are several challenges facing immunochemistry that have driven the need for more efficient / flexible immunochemistry automation, including:

The great resignation has led to **staffing challenges**, high turnover and difficulty maintaining work continuity with available staff

The number of clinical studies has greatly increased, while samples per trial and turnaround time required has decreased given rare-disease clinical study % mix increase

Clinical study **decentralization** has greatly impacted sample quality and sample consistency

The number and variety of bespoke assays in immunochemistry has greatly increased

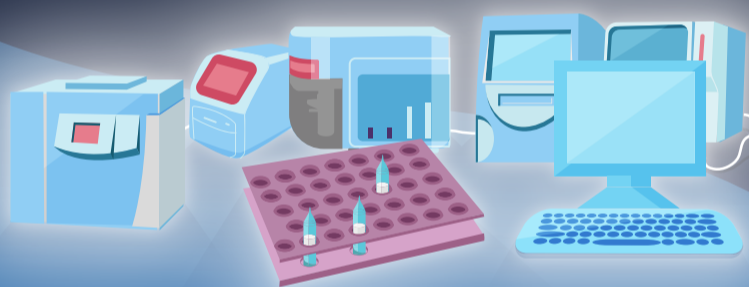


Limited lab space and rising cost pressures on lab performance

The ideal solution for immunochemistry automation is one that is:

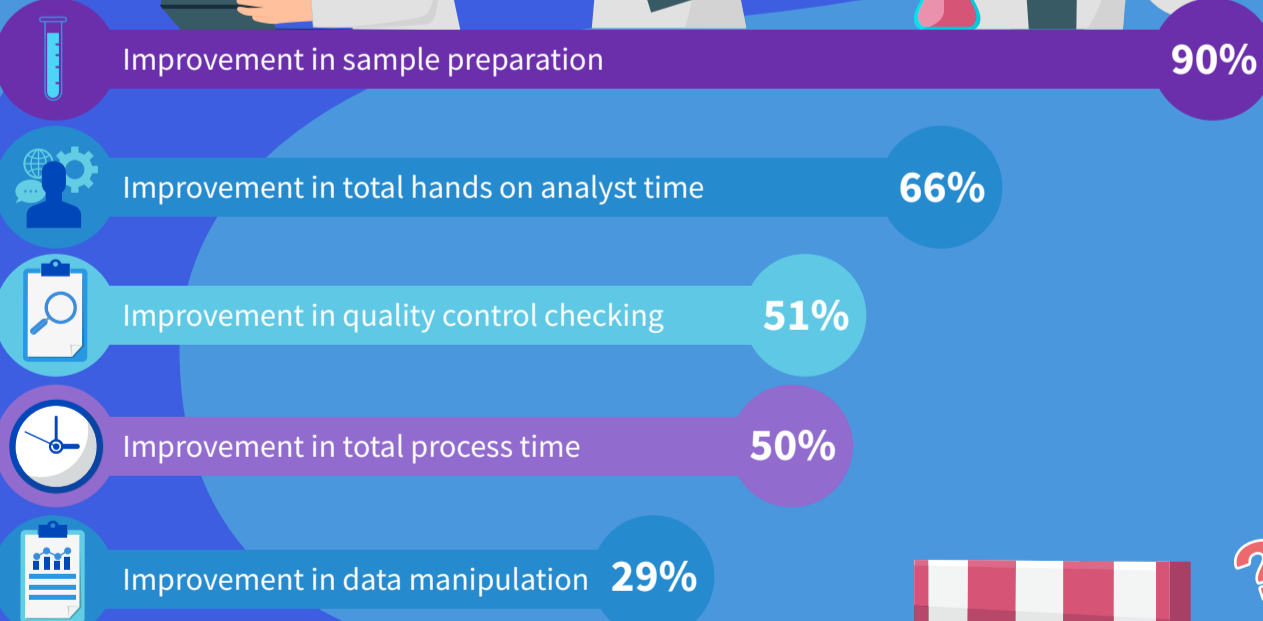
Fully integrated, scalable, and user-friendly automation platforms and reporting mechanisms to overcome staffing challenges, to increase capacity, to meet study turnaround time requirements and to reduce cost pressures on labs

Modular in its approach, building upon a common core for bespoke assay development and execution, that can drive automation flexibility and efficiencies despite increased variety of bespoke immunochemistry assays



## Future Considerations

Labcorp Bioanalytical Services has demonstrated that this type of ideal solution for immunochemistry automation can yield significant improvements in total sample processing time and staff efficiencies as compared to manual workflows, including:



While the results show the benefits of immunochemistry automation and a way forward towards more efficient workflows, comparing manual to automated results has presented **unique challenges** that have implications for future method development and validation



This infographic has been created as part of a Bioanalysis Zone feature with Labcorp