

A Chemishield Case Study



About The Client

Our client is an American multinational pharmaceutical company headquartered in New York City. They develop and produce medicines and vaccines for immunology, oncology, cardiology, endocrinology, and neurology treatment.

The company has several blockbuster drugs or products that each generate more than US\$1 billion in annual revenues. Our client is one of Ireland's leading employers and the largest pharmaceutical sector investor and employer, employing 4,000 employees across its five locations in Cork, Dublin and Kildare. Ireland acts as a leading manufacturing base where the client's newest medicines are manufactured for global export.

The Challenge

The client was seeking a software solution that would eliminate the risk of accidents associated with waste disposal, whilst also driving overall efficiencies through streamlining their waste streams and reducing operator disposal times. Their waste disposal processes were manual and cumbersome, involving large amounts of paper-based records. They were seeking a solution that would eliminate the risks associated with disposing of liquid waste, increasing productivity and efficiency while reducing the increasing costs associated with their chemical waste disposal.

Why Chemishield?

Today, our client has over 600 users who access Chemishield daily at their facility. Over a period of 12 months, Chemishield has saved the client €500,000+ through the prevention of accidents, improved disposal times & costs and improved bottle management across their waste ecosystem. Chemishield presents significant value for pharmaceutical companies that are facing ever-increasing challenges and mandates when it comes to EHS regulatory compliance.

Chemishield's two-step validation process ensures the client is able to provide safe waste disposal with zero disposal accidents occurring at their facility since deploying Chemishield.

Chemishield's reporting and insights have helped the client to identify gaps and trends within their waste disposal activity across their facility. These trends have helped our client to reduce disposal costs and improve bottle management which has delivered considerable cost savings. The use of Chemishield has also reduced the use of paper-based records and audit preparations due to the digitization of typically paper-based processes. All reports and activities are now available via the touch of a button in real-time with historical views through Chemishield.



Features

2 Step Validation

Improves the level of safety at a facility by eliminating the opportunity for human error with waste disposal.

Unlimited Waste Streams & Locations

Provides clear direction of where waste should go, both inside and outside the facility, keeping staff safe and reducing disposal related safety incidents by 100%. This is done through the prevention of mixing incompatible waste.

Complete Overview of On-Site Waste Flow

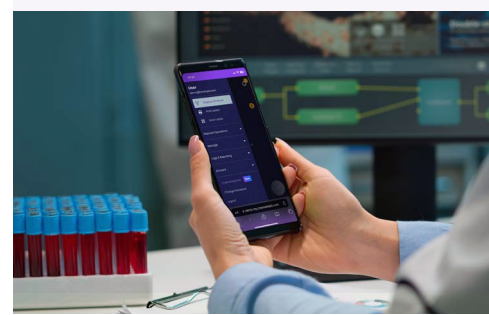
Clear insights into disposal inefficiencies across the organisation, allowing for strategic cost saving decisions to be made.

CLP Compliant Labeling As Default

Provides clear, unambiguous, CLP compliant labelling for technicians and the waste disposal vendor. Labels list the full contents of the bottle, show all relevant GHS pictograms, danger and warning statements.

Monitor All Activity Via Built In Reporting

Real-time analytics and reporting showing how much waste is being disposed of, where, when and by who. Entire content history of bottles and containers is available within seconds, meaning no more paper logs and an audit ready disposal trail whenever it is needed.



Benefits and Outcomes

No Accidents ✓

There have been no waste disposal accidents related to Chemishield in over 28,000 recorded disposals at our client's site. **427** accidents have been prevented since Chemishield launched at our client's facility. Chemishield estimated a conservative saving of €5,000 per accident avoided.

Estimated Annual Saving
€530,000*

Improved Disposal Times 🕒

On average it takes a Chemishield user 82 seconds to dispose of waste. Time studies carried out in 2019 and 2020 showed an average disposal time of ~7 minutes when not using Chemishield, saving ~5 minutes per disposal. To date in 2023, 255 working hours have been saved by our client's team through using Chemishield.

Estimated Annual Saving
€15,000

Improved Bottle Management 📄

Chemishield has allowed our clients to gain insight into how bottles are managed and has assisted in identifying efficiencies with regards to storage space and cabinets required in labs. Bottle lifespan and bottle disposal numbers offer a clear view of weekly and monthly bottle creation and removal figures.

Estimated Annual Saving
€11,000

Improved Disposal Costs 🏠

Chemishield has streamlined liquid waste management and in doing so has reduced the overall cost to have waste removed from the site for our client. By being fully informed of the content of the bottles along with the ability to dispose of fewer pallets for removal, Chemishield gives confidence that the contents are correct and as described on the label. This inevitably led to strong savings for the client.

Estimated Annual Saving
€10,000

Operational Outcome

Chemishield on Client's Facility 2020 - 2023

| | | |
|---|--------------------------------------|---|
| 0 Accidents | 647 Total User Accounts | 82 Average Disposal Time (seconds) |
| 85,142 Total Actions Recorded | 427 Total Accidents Prevented | 866 ml Average Disposal Volume |
| 88 Total Waste Streams | 158 Total Waste Locations | 6023 ml Average Waste Per Bottle |
| * Chemishield estimates a conservative average cost saving of €5,000 per accident prevented | | 2,163 Total Bottles Disposed Of |



| | |
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| 29% Percentage Of Waste Disposed Of To Sink | 7,279,853 ml Total Volume Of Waste Disposed Of To Sink |
| 71% Percentage Of Waste Disposed Of To Bottle | 17,576,158 ml Total Volume Of Waste Disposed Of To Bottle |
| 28,672 Total Disposals | 24,856,011 ml Total Volume of Waste Disposed Of |



Visit chemishield.com to get a recorded or live demo