



TwistLock Plates

Pros and Cons Analysis:
Locking vs. Standard Plates

Locking Plates		Standard Plates	
Pros	Cons	Pros	Cons
+ Enhanced sample security: locking mechanism prevents accidental lid displacement	- Higher up-front cost: locking plates are more expensive than standard plates	+ Familiarity: a well-established format that's well-entrenched into existing workflows	- Higher contamination risk: loose lids of standard plates can be accidentally displaced, exposing samples
+ 90 mm Redipor® TwistLock plates feature both vented and non-vented locking positions	- Potential process adaptation: some laboratories may need to adjust workflows	+ Lower cost per unit: standard plates are generally cheaper than locking plates due to their simplicity	- Data integrity challenges: GS1 DataMatrix codes on the underside require extra handling and time taken when scanning, or are not available at all
+ Improved data integrity: GS1 DataMatrix side-labelling for quick and easy scanning			- Inefficient workflows: handling, stacking, and transportation require extra care
+ Workflow efficiency: easier transportation and stacking, minimised handling time, enables use of automated colony counters			- Increased re-sampling: greater number of errors leads to more repeat tests and costly production delays
+ Regulatory compliance: support traceability by reducing reliance on manual data entry			
+ Minimised re-sampling: greater security means more reliable results			

At-a-glance

Feature	Locking Plates	Standard Plates
Sample Security	+ Secure closure prevents accidental contamination, reducing risk of false positives + Double locking mechanism – Vent and No Vent	– Loose lids can easily be displaced, resulting in need to resample
Easy Data Handling	+ GS1 DataMatrix side-labelling offers quick and easy scanning, and ability to use automated colony counters	– GS1 DataMatrix codes on underside, if available at all, increase scanning time and handling risk
Workflow Efficiency	+ Faster, more confident handling and stacking	– Extra care needed in transportation and storage
Regulatory Compliance	+ Supports traceability and audit readiness	– Higher risk of manual entry errors
Cost Factors	– Higher upfront investment	+ Lower cost per unit
Ease of Adoption	– May require some process adjustments	+ Already widely used and incorporated into existing workflows

Conclusion

While standard plates are a known factor in laboratory workflows and have a lower upfront cost compared with locking plates, their significant drawbacks – contamination risk, inefficient handling, and data integrity challenges – can mean that traditional plates cost more in the long term.

Locking plates, such as Redipor® TwistLock, offer a secure and efficient alternative, improving sample security, workflow efficiency, and regulatory compliance. Despite their slightly higher initial cost, their long-term benefits in reducing errors and the need for re-sampling make locking plates a compelling choice for laboratories focused on precision and contamination control.

