



Pathozyme®ElisaSure

Laboratory Maintenance

Laboratories depend on accurate equipment to deliver dependable results day in, day out. To ensure their performance is reproducible within known parameters, between maintenance periods and after repair, this specialist equipment is meticulously checked and verified in line with international and national quality standards.

To attain and preserve accreditation to these standards, laboratories must provide verification that their equipment operates accordingly. Indeed, rather than skewed results through malfunction or error, the kit should deliver assured results whatever the task, whenever it is used.

Equipment tests prior to use and following maintenance are therefore fundamental to ensuring consistent and accurate results. Pathozyme®ElisaSure provides the means to check the linearity and precision of microplate readers, the efficiency and reproducibility of microplate washers and the precision of manual and automated pipettes. It is a complete testing solution in one.

"Pathozyme®ElisaSure
is designed to provide
confidence in
your results"

Pathozyme®ElisaSure – an overview

Pathozyme®ElisaSure has been specifically designed to test all microtitre plate washers, microplate readers and manual and automated pipetting devices.

It ensures early detection of deficiencies before any impact is recorded on process reliability. In fact, by using Pathozyme®ElisaSure regularly, documented records can be produced which can serve as evidence of equipment performance and be used to compare current and historical operating levels.

Pathozyme®ElisaSure tests all aspects of equipment testing

Tailored to provide optimum assessment of microplate reader linearity and precision as well as microplate washer performance, Pathozyme®ElisaSure covers all aspects of equipment testing from a single source. It incorporates checks for:

- **Microtitre readers**
Reader linearity
Reader precision
- **Microtitre plate washers**
Washer performance
- **Pipetting devices**
Pipette accuracy
Manual and automated

Confidence in results

Rigorous equipment checks are essential to attaining reliable results and confidence in your findings. Pathozyme®ElisaSure can be retrofitted to an existing maintenance regime creating a seamless process of verification. The result is assured equipment performance and reliable laboratory results.

Reader linearity

This is an important test that gauges linearity over the entire diagnostic range of your reader. In the event of unexpected results during sample testing or after repair or maintenance, it is recommended the test should be performed in duplicate on a monthly basis.

The resulting data can be referenced against previous figures to monitor instrument performance, while reproducibility between duplicate strips confirms pipette precision and method.

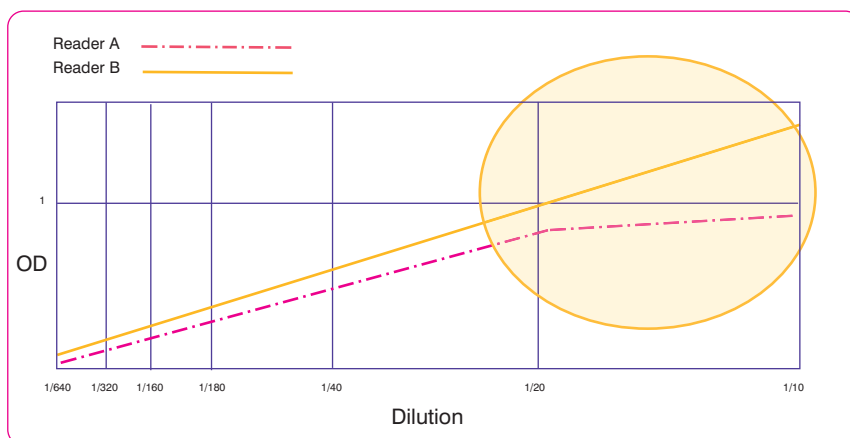
- Measures linearity over the entire diagnostic range
- Monitors instrument performance
- Performed monthly

Reader precision and washer efficiency

This key test assesses microplate reader accuracy by identifying defective readers through coefficients of variation (CV). Put simply, any reader with a CV exceeding 5% should be investigated. Microplate washer efficiency can also be calculated resulting in prompt identification of inefficient processes that can produce questionable results.

- Evaluates reader accuracy and washer efficiency
- Provides a clear indication of deficiencies
- Performed weekly

Figure 1 - Microplate Reader Linearity Example



Results:
Reader A - Linear to OD 1.0
Reader B - Not Linear to OD 1.0

Pipetting test

Applicable to both manual and automated pipetting, this test produces crucial data which can be compared against previous figures to monitor performance over time. Recommended to be carried out on a bi-weekly basis when unexpected results skew sample testing or emerge following repair or maintenance, this test investigates suspicious outcomes quickly and efficiently.

- Assesses both manual and automated pipetting
- Results can be monitored over time
- Performed bi-weekly

Figure 2 - Microplate Reader Precision (example figures)

Row	OD			
	Reader A		Reader B	
A	0.431	0.417	0.430	0.424
B	0.435	0.427	0.613	0.625
C	0.425	0.420	0.620	0.613
D	0.418	0.421	0.426	0.418
E	0.429	0.418	0.419	0.416
F	0.415	0.422	0.422	0.429
G	0.414	0.430	0.418	0.412
H	0.425	0.433	0.427	0.417

Example figure interpretation

Reader A - Acceptable - Mean 0.423 SD 0.00539 CV% 1.51
Reader B - Not Acceptable - Mean 0.470 SD 0.00851 CV% 18.11 (greater than 5%)
Note High Readings in row B and C - Investigation required

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