Rigorously tested for your peace of mind.

StatLab Cassette Printers tested for equivalent use of 24 years.

By Bill Martin, StatLab PiSmart Product Manager

Background

StatLab is committed to designing and producing high-quality, best-in-class printers which reduce the burden of maintenance and attention needed throughout the product lifetime, enabling laboratories to spend more of their time on patient care. During development of the PiSmart cassette printers, accelerated life testing was performed to ensure the product delivered on high performance expectations.

We are proud to say that all production units were shipped with this level of quality built-In!

Methodology

A test was designed to measure the reliability of StatLab PiSmart cassette printers over the typical lifetime of the instrument. Typical tests like these are accelerated in order to complete a typical instrument operation in a much shorter period of time. Five cassette printers were used for the testing, each run with a single cycle to include:

- A full movement of the dispense from home to eject of cassette and return to Home.
- Rotation of the clamp assembly from Home to Clamp, pause, move from Clamp to Home.
- Movement of the print assembly from home position to eject position and return to home position.

The test design called for each printer to run a minimum of 300,000 cycles which equates to 11 years of typical use per instrument.

Accelerated Life Test Results[1]

At the completion of the testing, the units were inspected and no wear to the cassette delivery or clamp assembly was seen.

Two printers were run with an additional 310,000 cycles. The units were inspected and no wear to the slide delivery or clamp assembly was seen.

Conclusion

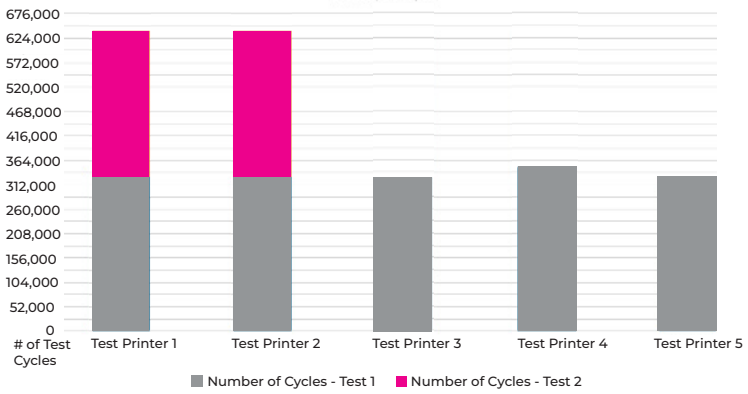
The five units were run beyond the planned 300,000 cycles with two of these units running an additional 310,000 cycles for a total of over 639,000 cycles on each instrument. This is an equivalent of approximately 24.58 years of typical operation on each printer.

No problems were reported. This test of five printers exceeded the planned 300,000 cycle test to sufficiently ensure runtime test requirements equivalent to ten years were met for the entire study, with two printers running the equivalent of an additional 14 years each for a total of 24.58 years of average use.

This test is considered to not only be a pass, far exceeding the expected lifetime of laser and thermal transfer cassette printers. The result demonstrates a high level of product quality that is ready for use in any AP lab setting.

Figure 1. Accelerated Life Testing Cycles

Five printers were evaluated for one year or more of typical use. Each horizontal line in the chart represents one year of typical use.



[1]PI007-D087 Reliability Test Report v3

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