DATA ACQUISITION SOFTWARE (DAS)

ViVitro offers a family of quality data acquisition software products to aid in collection of data to meet ISO 5840 requirements.

Specifically we have developed three software products: ViViTest, HiTest and QCTest. The software is pre-installed on a laptop and tested with all hardware and A-D converters prior to shipment. Each complete system is supplied with the following components to make up a functional system:

- I/O Module – inputs/outputs signals from the software
- AmPack Pressure Measuring System including transducers and amplifier
- Laptop
- Connecting cables
- Software (ViViTest, HiTest or QCTest)
HiTEST

When coupled with the HiCycle or the Real Time Wear Tester, HiTest provides the most powerful, user-friendly tool for durability testing.

Operators are able to monitor pressure and collect data through an intuitive user interface. HiTest provides accurate pressure data and statistical analysis to ensure the tested devices are meeting ISO 5840 standards. The results highlight the percent of cycles and percent time per cycle the device is meeting or exceeding target pressure. HiTest is source code developed software (unlike Labview), meeting stringent design verification, validation and testing in accordance with ISO 5840 requirements.
ViViTest provides the most powerful and user-friendly tool for hydrodynamic testing when coupled with the Vi Vitro Pulse Duplicator.

ViViTest software controls the SuperPump while simultaneously measuring pressure and flow data. It monitors, processes, and reports data allowing for easy calculation of regurgitant fraction, effective orifice area, and many more valve performance indicators. ViViTest is source code developed software (unlike Labview) that can meet stringent design verification, validation and testing in accordance with ISO 5840 requirements. A calibration wizard walks new users through the set-up process thus facilitating a wide array of data collection options. Output files are available in versatile formats for easy analysis in Excel and MatLab.
**QCTEST**

*The ViVitro QCTest software is the only turnkey function test software available. The software is easy to use and can be paired with a specific Function Tester Load Assembly on the ViVitro Pulse Duplicator, for quick valve change-outs.*

This allows ViVitro to provide a turn-key solution for one of the most time-consuming and burdensome aspects of production to validate. First in meeting QC production needs, the QCTest software system was developed as a quality control tool to specifically meet the demands of QC performance testing heart valves (function testing). Meeting the highest levels of validation, this production tool enables you to provide fast, reliable results, for a fraction of the cost it would take to design and validate an in-house system. QCTest is tailored to measure valve performance in accordance with regulatory requirements. QCTest meets production needs by including security, risk management, a simplified user interface, error checking, control steps and standard outputs. The software is scalable to include interfacing with various electronic DHR systems and bar code reading. QCTest function test software is source code developed meeting validation requirements outlined in the FDA General Principles of Software Validation.