



Vanquish Core HPLC Systems

Simple to the CORE

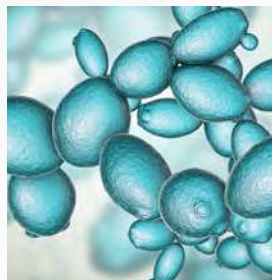


Continually deliver results

When you can't tolerate any disruptions to your daily analytical work, the Thermo Scientific™ Vanquish™ Core HPLC systems empower your operators to continually deliver exceptional results. Transferring methods to the Vanquish Core system is simple and seamless, regardless of your current HPLC setup.

Built upon the innovative Vanquish platform, the Vanquish Core HPLC systems provide exceptional analytical precision, detector sensitivity, and operational simplicity to enable unprecedented reliability and robustness. Designed specifically for routine analysis laboratories, the Vanquish Core HPLC systems provide:

- Dependable system uptime through innovative system health checks and improved system ruggedness
- Simple integration into existing infrastructure by enabling control under Thermo Scientific™ Chromeleon™ Chromatography Data System (CDS) software and Waters® Empower® CDS software
- Compliant-ready infrastructure that minimizes unexpected results and out-of-specification events
- Empower lab personnel with intuitive system operation and simplified user maintenance
- Seamless method transfer from all common HPLC systems
- Smooth integration into the broad Thermo Scientific LC-MS portfolio



Detect your analyte

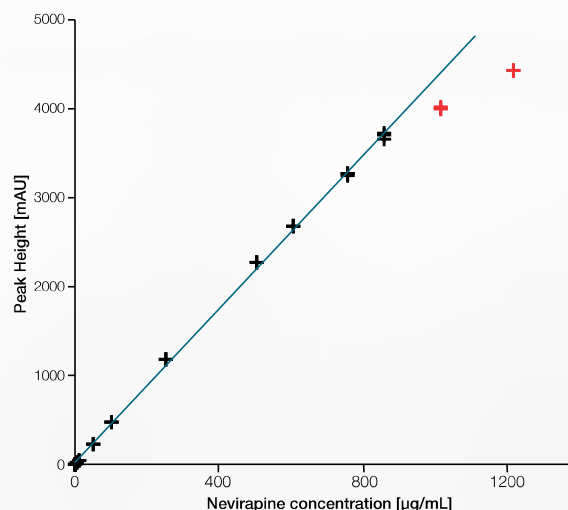


Choosing the right detection technology is key to revealing all the components of interest in your sample. The Vanquish Core HPLC systems offer a wide range of detection capabilities that can be easily integrated and combined to fit your methods.



Industry-leading diode array detection

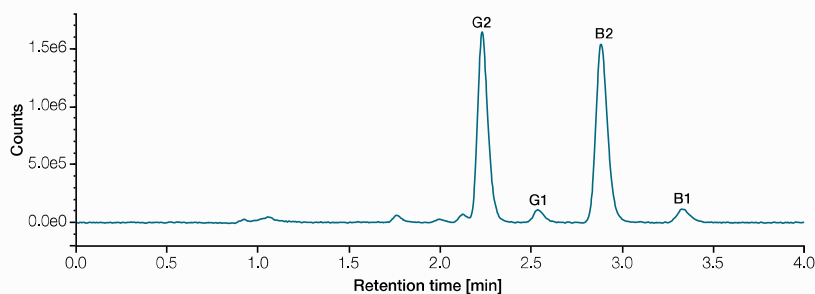
The industry-leading Thermo Scientific[™] Vanquish[™] diode array detectors offer excellent signal-to-noise performance and the widest linear range, exceeding that of variable wavelength detectors. Based on diode array detection technology, the multiple wavelength detector offers a cost-effective solution for simultaneously acquiring up to eight UV-Vis wavelength channels.



Concentration vs. peak height plot of nevirapine with data points that were considered for calibration (black) and data points that were eliminated from calibration due to curve decline (red). Linear calibration with permitted offset and no weighting.

Powerful fluorescence detection

Fluorescence detection enables high sensitivity and selectivity.



FLD chromatogram of the four aflatoxins: G2, G1, B2 and B1 at a concentration of 0.9 µg/kg for G2 and B2 and 2.9 µg/kg for G1 and B1.

Variable wavelength detection

UV-Vis detection with excellent sensitivity and linearity is a cost-effective and powerful solution for quantitative compound analysis.

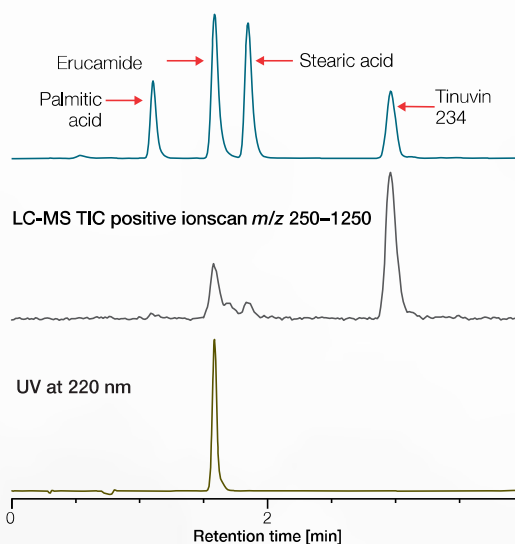




Uniquely universal charged aerosol detection

The Thermo Scientific™ Vanquish™ charged aerosol detector is powerful, uniform, and universal; able to detect virtually any large and small molecule with sub-nanogram-level sensitivity, even those that lack a chromophore or that poorly ionize. The flexibility and performance of charged aerosol detection is ideal for analytical R&D, while its simplicity and reproducibility benefit manufacturing QA/QC applications.

Charged Aerosol Detection



Unlike mass spectrometry and UV, the CAD is able to measure all analytes in the sample. Mass spectrometry (MS) requires the analyte to form gas phase ions while response by a UV detector depends upon the nature of the chromophore.



Simple mass detection

Mass spectrometry gives access to valuable data no other technology can deliver. The easy to use Thermo Scientific™ ISQ™ EM single quadrupole mass spectrometer or the Thermo Scientific™ ISQ™ EC single quadrupole mass spectrometer integrates with LC systems for reliable, robust, and easy LC-MS routine analysis with an extended mass range for more flexibility. Integrated software allows both novices and experts to quickly master MS to gain more insights from every sample.



Pairing smoothly with your LC-MS

LC-MS quantification is a widely used technology in many application fields, including food safety and environmental monitoring. In conjunction with the Thermo Scientific mass spectrometer portfolio, Vanquish Core delivers a great solution for ultra-sensitive detection. For control of your LC-MS setup you can choose between the feature-rich Thermo Scientific™ Xcalibur™ software, the powerful Thermo Scientific™ TraceFinder™ software or the compliant-ready Chromeleon CDS control.



Innovating for you



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1 Vanquish Solvent Monitor

Use the Vanquish Solvent Monitor to increase your regulatory compliance, productivity, and safety of your laboratory. That device guarantees that your HPLC systems will never run dry and the waste will not spill over, reducing loss of valuable measurement time and sample material.

2 Vanquish User Interface

With the Vanquish User Interface, you are the master of your LC instrument. The display always shows you the key parameters of your instrument such as flow and pressure and guides you in a visual step-by-step video tutorial through key maintenance tasks.

3 Detection capabilities

Differing molecular characteristics of your analyte, from small molecules to complex biomolecules, necessitates multiple detector technologies. The Vanquish Core systems have been built to utilize a wide range of analytical detectors, including mass spectrometry (MS), diode array detection (DAD), multi wavelength detection (MWD), charged aerosol detection (CAD), variable wavelength detection (VWD), and fluorescence detection (FLD).

4 SmartInject Technology

Superior retention time precision and accuracy, as well as enhanced column protection.

5 Proprietary injection and switching valves

The valves used in the Vanquish Core HPLC systems are designed to meet the reliability needs to make HPLC run robustly and routinely. The valves are long-life and follow a no maintenance philosophy reducing your overall cost of ownership.

6 Easier operation

Utilizes tool-free Thermo Scientific™ Viper™ Fingertight Fittings with near-zero dead volume operation and ergonomic design.



7 Simple maintenance

Modules can be repaired without de-stacking; each unit has handles for ease of maneuvers; light bars on the front of the system indicate system status; and the entire system supports tool-free maintenance.

8 Keep your lab tidy

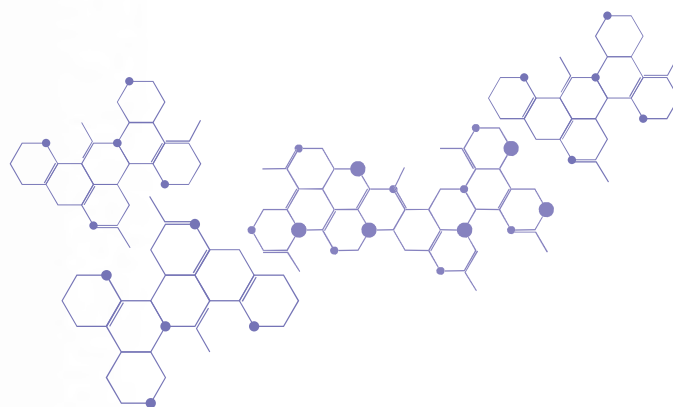
The built-in drawer stores accessories, related documents, or any other useful material for the system.

9 Easy to adopt

The tunable gradient delay volume and multiple thermostating options allow you to precisely replicate your legacy HPLC methods.

10 Compatible with your software infrastructure

Support under various software environments, including the latest Chromeleon CDS feature release and long-term support versions, and Waters Empower CDS.



Thermo Scientific LC Portfolio Overview

HPLC systems

Routine analysis

UHPLC systems

Method development

Research and high throughput

Thermo Scientific™ Vanquish™ Duo HPLC and UHPLC system workflows

Thermo Scientific Vanquish Core HPLC system

- Workhorse instrument to dependably deliver results
- System intelligence for improved productivity
- Seamless method transfer
- Low pressure, high pressure, and isocratic solvent blending



700 bar

Thermo Scientific Vanquish Flex UHPLC system

- Unparalleled flexibility and control
- High throughput, high sensitivity
- Low pressure and high pressure solvent blending



1000 bar

Thermo Scientific™ Vanquish™ Horizon UHPLC system

- Industry-leading precision and accuracy in delivering sample information
- Unmatched detection, sensitivity and speed
- Truly future-proof with specifications far in excess of all others
- Optimizes the benefits of LC-MS analysis



1500 bar

The collective power of chromatography

LC that takes your productivity to new heights



Find out more at thermofisher.com/vanquishcore