

Ultra High Performance Liquid Chromatograph for Online Dissolution Testing

Nexera FV



Taking Online Dissolution Testing Into the New Era of Ultra High Performance Chromatography

Nexera FV

Dissolution tests are widely used in original pharmaceuticals development and quality control and for bioequivalence tests in generic drugs.

The Nexera FV provides substantial labor savings by automating processes ranging from the dispensing of dissolution media to data acquisition and data analysis.

In addition, the system is based on the Nexera X2, renowned for its speed, sensitivity, and stability. Now you can quickly obtain reliable dissolution test results. The Nexera FV can also be used as a standard UHPLC system, ensuring high laboratory throughput.





Provides Labor Savings and Faster Speeds in Dissolution Testing

- A high-efficiency UHPLC offering short analysis times
- Unattended operation for overnight testing
- Automated reporting

Sufficient to Quickly Dissolving Samples Tests

- Handles sampling intervals as short as 5 minutes
- UHPLC analysis ensures quick turn-around of results

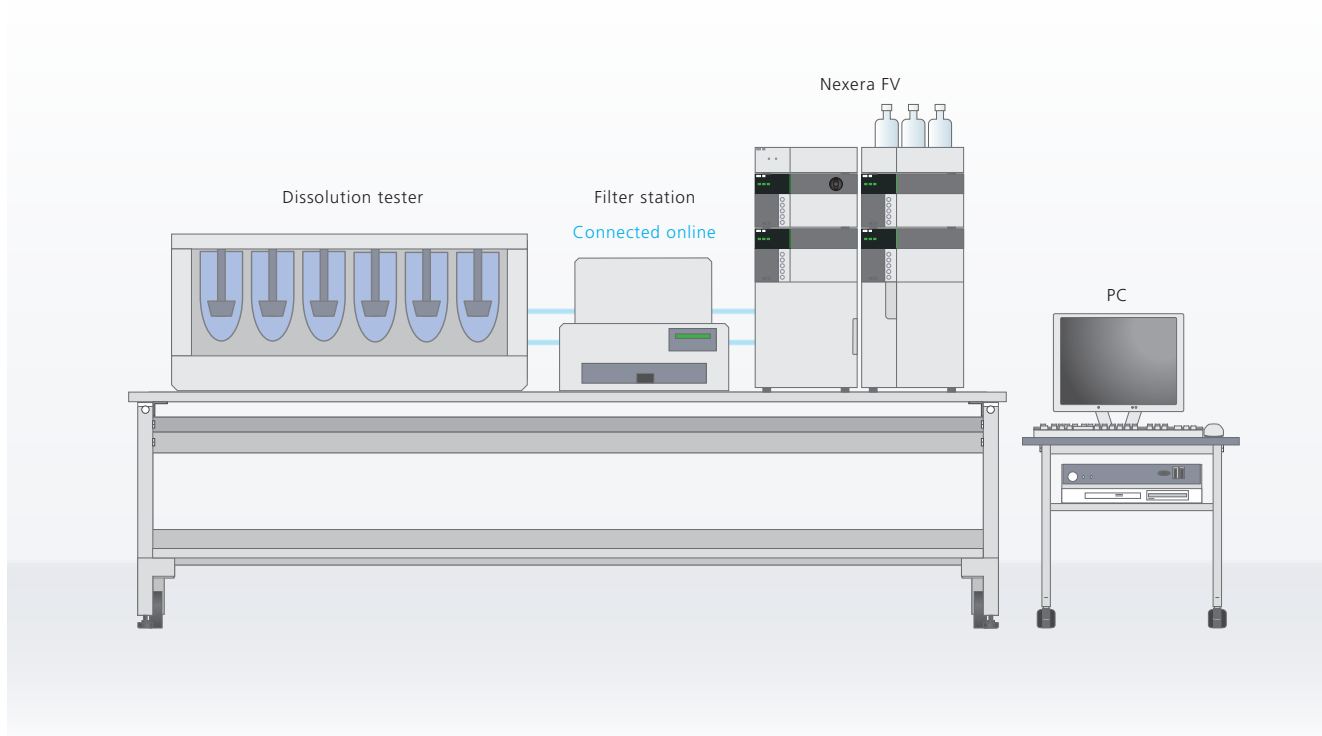
Substantial Improvements in Work Scheduling

- By using dedicated software of Nexera FV, the burden of preparing the exam schedule can be drastically reduced.



System Configuration for Online Dissolution Testing

With the Nexera FV, the dissolution tester and the autosampler are connected online, so everything is automated from sampling to dilution to data acquisition and analysis. There is no manual dispensing of samples, ensuring reliable results.

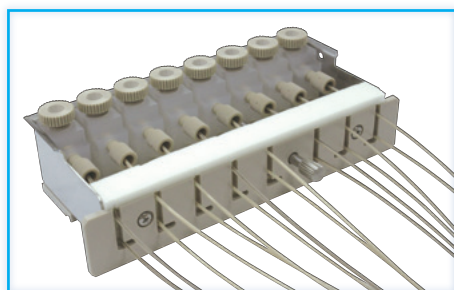


● Flow Vials Provide Automated of Dissolution Testing

Dissolution medium from the dissolution tester flows directly into flow vials loaded into the autosampler. A bubble suppression design has been adopted for these flow vials, enabling

high-accuracy sampling of dissolution media.

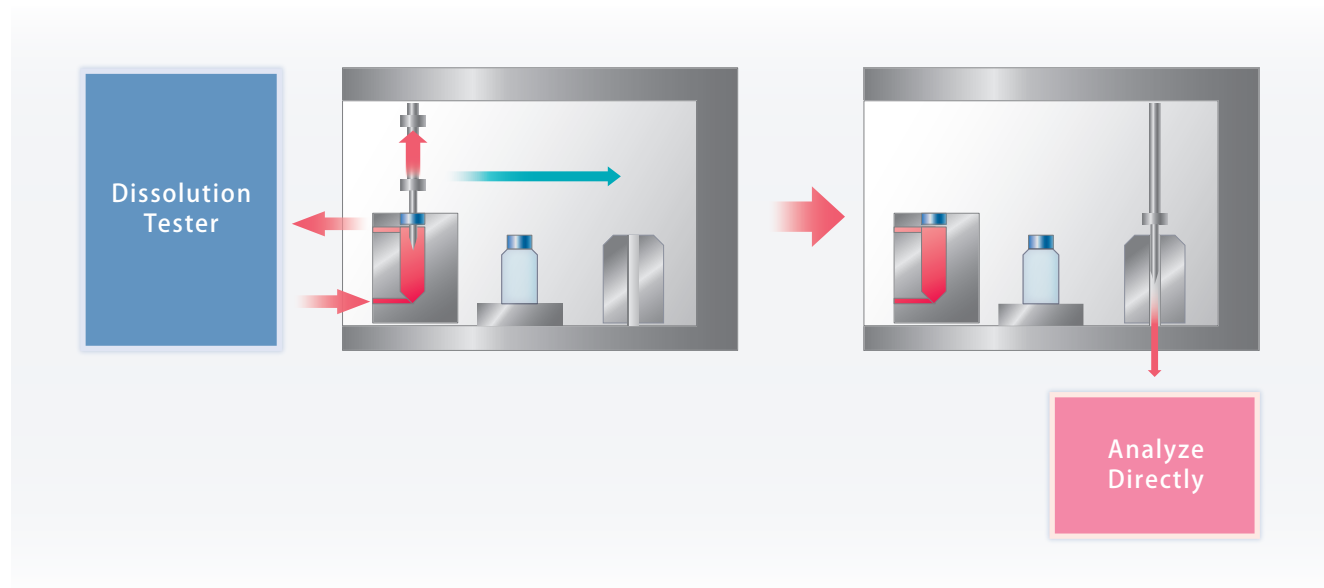
Depending on the dissolution tester used, 8 or 12 flow vials can be loaded.



Two Analysis Modes Promote Faster Dissolution Testing

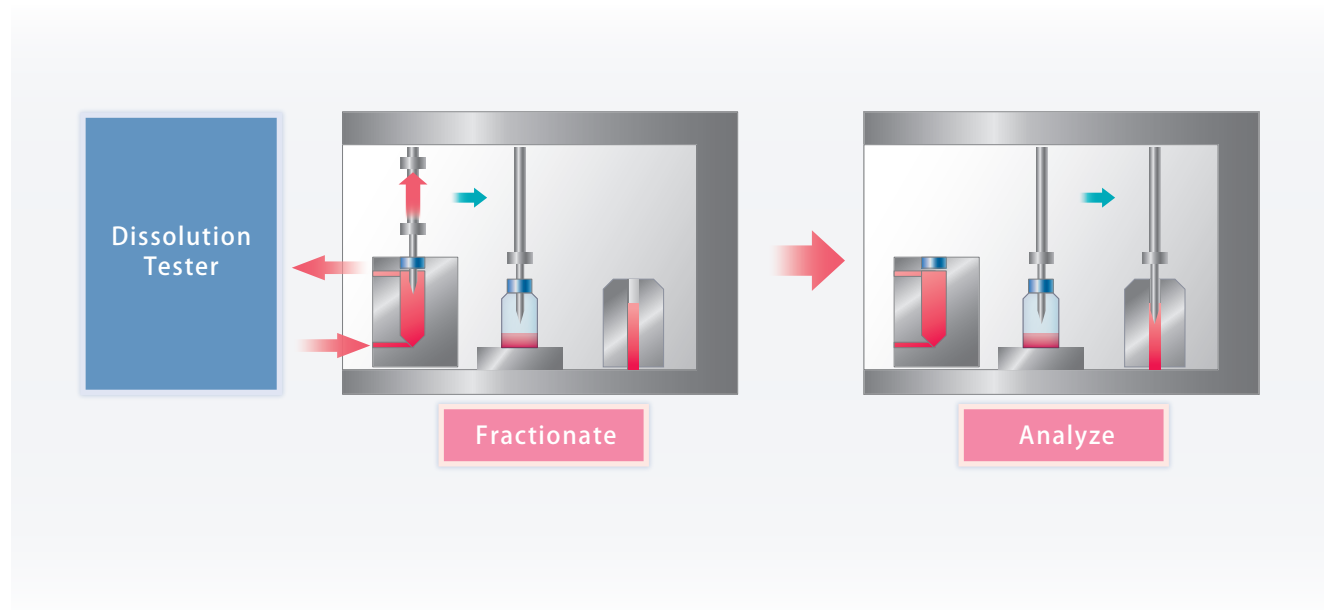
1 Direct Injection Analysis Mode: Exclusively with the Nexera System

If the analysis of the dissolution sample set finishes before the next sampling time, the medium can be injected directly from the flow vial connected to the dissolution tester, for use in analysis.



2 Fraction Analysis Mode: For Confirmation of Dissolution Profiles Equivalent with UV Spectrophotometers

This analysis mode is used for tests with very short dissolution sampling intervals. Up to 768 samples can be fractionated. This mode is also effective when dissolution quantities are large and dilution is required. Sampling intervals as short as 5 minutes are realistic.



Reliable Performance Expands the Range of Choices

Compatible with High-Concentration Samples Requiring Dilution

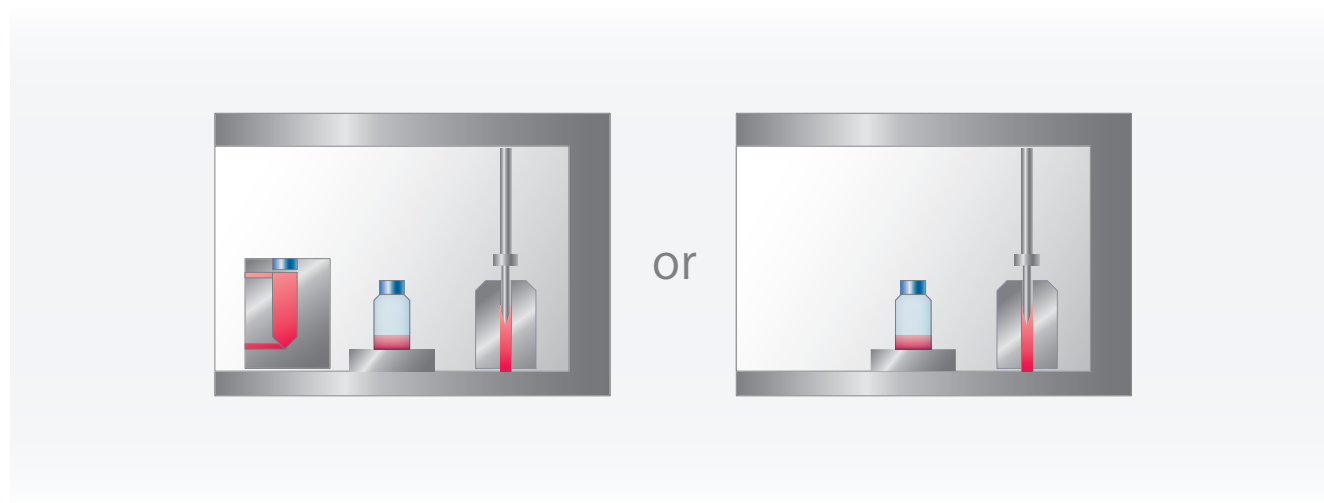
High dissolution quantity samples often require dilution. Samples can be diluted by using the fraction analysis mode. High injection accuracy is provided even at trace quantities, enabling reliable dilution even without manual handling.

The data shows a comparison between a standard liquid (aqueous caffeine solution), with the dilution ratios manually adjusted by an experienced engineer, and a standard liquid automatically diluted by the Nexera FV. This data shows that the system can perform dilution reliably.

Dilution Ratio (Times)	Dilution Accuracy (%)
2	100
5	100
10	101
20	101
50	101
100	102

One System Plays Two Roles, Significantly Improving the Throughput of the Testing Lab

The Nexera FV is a multipurpose system for on-line dissolution testing and high-efficiency UHPLC analysis, such as compound screening.



Provides High Cost Effectiveness in Testing Thanks to Consumables with a Long Operating Life

A special septum is used for the flow vial that receives the dissolution medium. It boasts a better degree of adherence after needle penetration in comparison to a regular septum, and can be used for 100 continuous injections without leaking. This greatly reduces maintenance, enabling continuous testing.

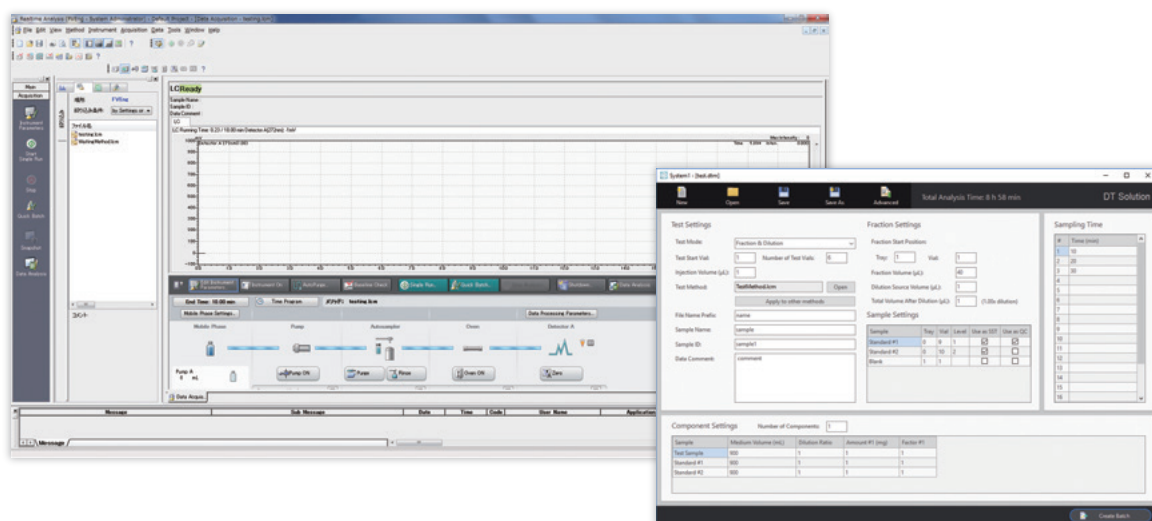


Special Software Makes Testing Preparation More Efficient

DT-Solution Software Supports the Creation and Implementation of Test Schedules

With dissolution tests, one of the most labor-intensive processes is establishing a batch schedule for the test. The custom DT-Solution software eases the burden. The user can configure all the required

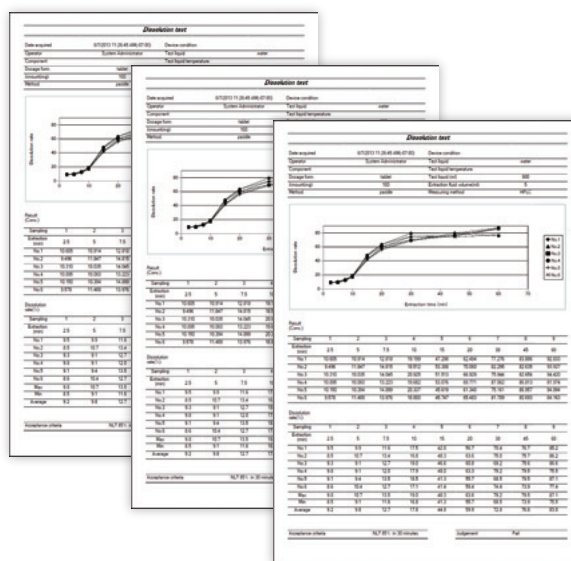
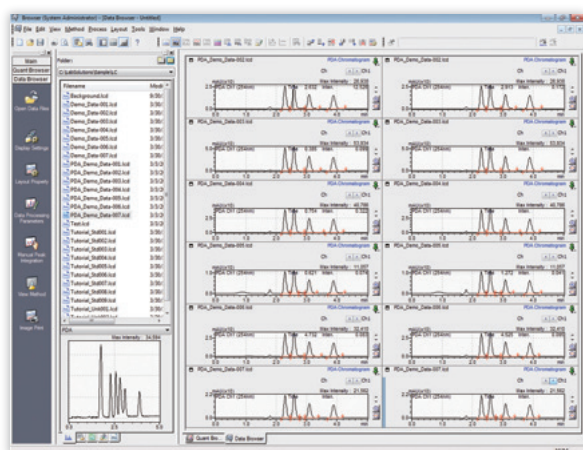
information in a single window. Then, click a single button to automatically generate a batch schedule in LabSolutions so that testing can smoothly start..



Rapid Confirmation of Test Results and Automatic Generation of Reports

The browser function built into LabSolutions is convenient for assessing changes in the chromatogram over time. Multiple data set can be displayed simultaneously in a single window, so the data can be compared at a glance. In addition, the creation of reports on the

test results can be completely automated with the multi-data report function. When the test finishes, a result table, pivot graphs, and test pass/fail judgments for each component are created automatically, so the test results can be rapidly confirmed.





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