

# AFFINITY PURIFICATION

## Profinia™ System Software

- Use software to view, share, and store Profinia instrument data
- Download data to view post-run
- View data in real time during purification
- Create reports to document and present purification data

## View Data and Create Reports Easily With Profinia Software

### Introduction

The Profinia protein purification system includes an instrument with common affinity-tagged protein purification methods (accessible via a built-in user interface touch screen), media in prepacked cartridges, purification reagent kits, and data reporting software (Figure 1). This system provides an automated and efficient alternative to more labor-intensive or complex chromatography systems, and it reduces the training, hands-on time, and level of expertise required for affinity purification.

Profinia software is not required to run the instrument, but it broadens system utility by displaying and reporting the run data generated by the Profinia instrument and methods. Data from purification runs are displayed in chromatograms and tables that are easy to read and understand. Profinia software provides fast, convenient access to protein purification data for downstream use in displays, records, and presentations.



**Fig. 1. The Profinia instrument, consumables, accessories, and reporting software form a complete purification system for automated purifications and documentation of results.** Profinia software runs on standard PCs; a PC is not included with the system unless specified. (See ordering information for system configuration options.)

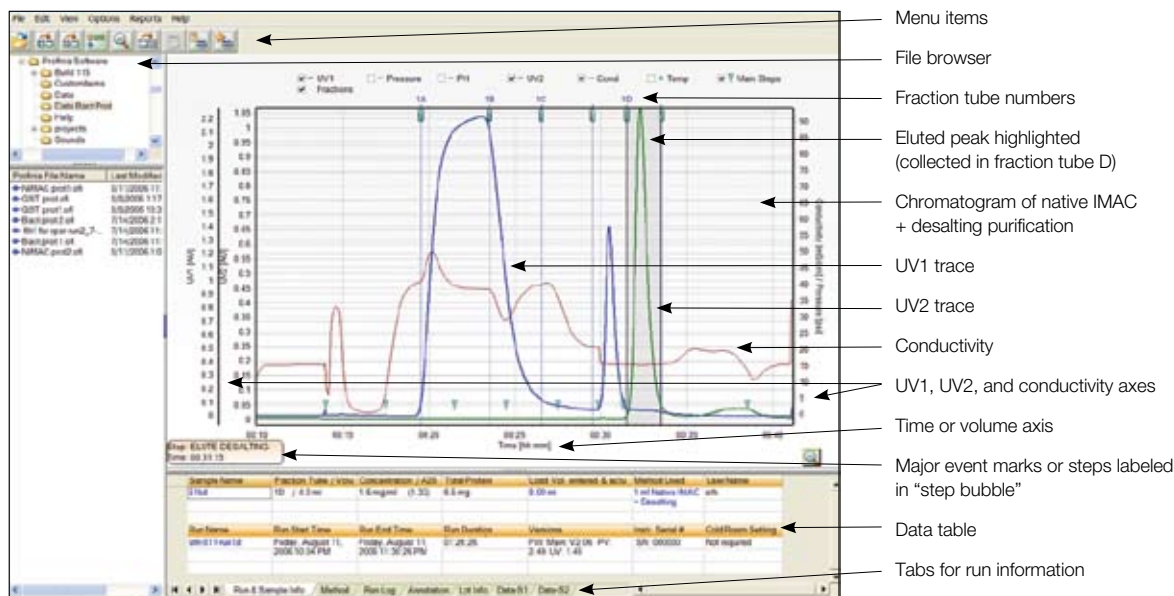


Fig. 2. The Profina software main menu includes a chromatogram, data table, and file browser for easy navigation to the sample run information.

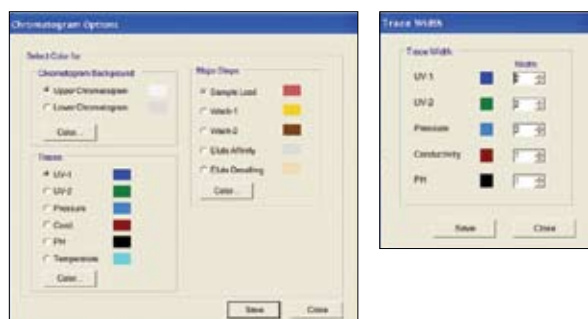


Fig. 3. The chromatogram display is easily customized.

### Profina Reporting Software

Typically, data for assessing purification results are not generated by manual affinity purification methods, such as purifications on gravity-flow columns. Profina reporting software enhances the Profina protein purification system by providing the ability to view data in chromatogram and tabular formats (Figure 2), creating a permanent record and a means for reporting results. Profina software does not program or control the instrument and is not required for use with the system. You can transfer run data to Profina software in two ways. After a run is completed, you can transfer run data from the Profina instrument to a PC using a USB portable memory device. This process is convenient for saving purification data on the scientist's computer. Since the software can be installed on multiple computers, it can be used for analysis, presentation, and reporting by each individual who uses the Profina system.

### Real-Time View

To view run data in real time during purification, connect the instrument to a PC via the USB cable that is included with the software. The direct connection to the Profina instrument via the USB port on the back is helpful to become familiar with the purification process, to monitor a purification, or to closely track the progress of a new custom method.

### Accessible Purification Results

Profina reporting software presents a convenient way to view the data generated by system purification runs. The main screen displays the data in a chromatogram format. The buttons above the chromatogram are used to select and deselect the traces shown, so it is easy to customize the view (Figures 2 and 3). A data table is displayed below the chromatogram to show important sample information, including yield and concentration, which are automatically calculated by the Profina instrument.

The reporting software displays the following for each run data file:

- Affinity and desalting chromatogram — includes UV, conductivity, pH (optional), pressure, fraction events, and temperature
- Run information — user name, run name, and method type
- Sample information — sample name, estimated protein concentration and total protein yield, extinction coefficient, and purified protein fraction tube number

- Method information — method type, method steps (flow rate, time, column volume, buffer position, buffer concentration), and sample volume loaded
- Run log — overview of all events performed by the instrument

#### Data Reporting

The software provides convenient prepared report templates so documentation is consistent across all users in a laboratory. The reports can also be customized to suit individual needs or preferences for data display (Figure 4).

The chromatograms and reports can also be exported to presentation programs (such as PowerPoint) and word processing programs to enable complete information exchange during meetings or with colleagues.

#### Data Analysis

Profinia software also includes features that allow you to make detailed analyses of purification runs and to compare and make overlays of multiple runs (Figures 5 and 6). These functions are especially helpful for evaluating a purification and troubleshooting an unexpected result.

- In the main chromatogram, the traces can be selected and deselected, and the chromatogram can be zoomed to get a closer look at specific areas of interest
- The Options menu provides preference settings for color-coding traces, highlighting the eluted peak, and using time or volume for the x-axis
- Chromatograms are compared by selecting sample runs for a tiled view
- Up to 10 chromatograms can be overlaid for a detailed comparison of run data

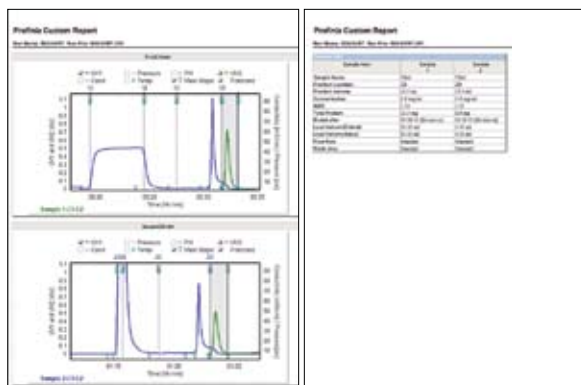


Fig. 4. Reports can be customized and saved in the preferred reporting format, allowing user-specific routine documentation of purifications.

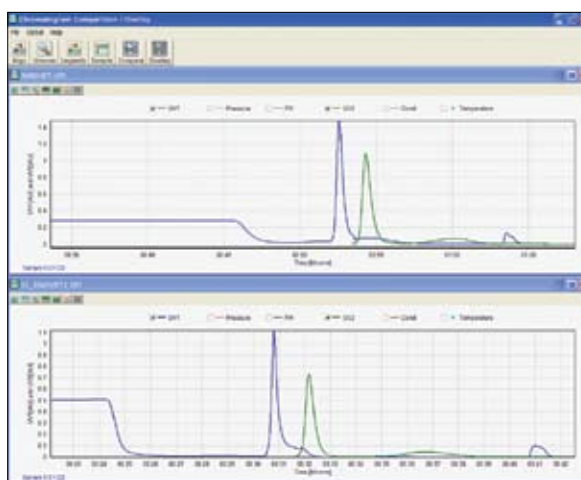


Fig. 5. The compare chromatogram function tiles multiple sample chromatograms for easy comparison of purification results.

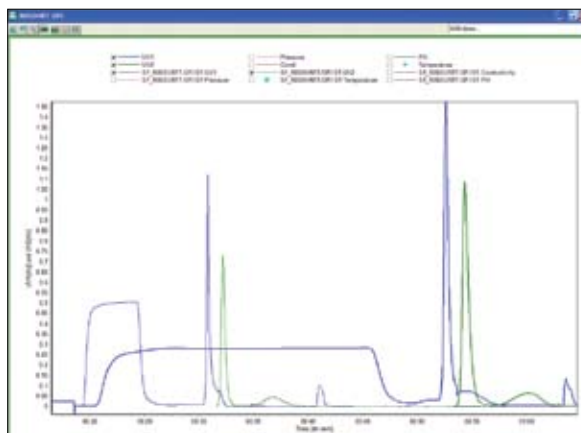


Fig. 6. The overlay chromatogram function places the data trace from one sample onto the chromatogram of another sample, which allows closer analysis of specific run features.

## Ordering Information

Catalog #	Description	Catalog #	Description
<b>Profinia Software</b>			
620-0010	<b>Profinia Software</b> , includes USB cable	620-0237	<b>Profinia Denaturing IMAC Purification Kit</b> , 5 ml, includes 2 Profinia denaturing IMAC buffer kits, 1 x 5 ml IMAC cartridge
<b>Profinia Instruments</b>			
620-1005	<b>Profinia Instrument With Accessory Kit and Native IMAC Starter Kit</b> , 100–240 V, includes cleaning tray, inline filter pack, 2 x 50 ml sample lids, 2 x 15 ml sample lids, bottle starter pack, waste/diluent bottle set, Profinia native IMAC buffer kit, 1 x 1 ml IMAC and 1 x 10 ml desalting cartridge, <i>E. coli</i> lysate	620-0226	<b>Profinia GST Purification Kit</b> , 1 ml, includes Profinia GST buffer kit, 2 x 1 ml GST and 2 x 10 ml desalting cartridges
620-1006	<b>Profinia Instrument With Accessory Kit and GST Starter Kit</b> , 100–240 V, includes cleaning tray, inline filter pack, 2 x 50 ml sample lids, 2 x 15 ml sample lids, bottle starter pack, waste/diluent bottle set, Profinia GST buffer kit, 1 x 1 ml GST and 1 x 10 ml desalting cartridge, <i>E. coli</i> lysate, glutathione reagent	620-0236	<b>Profinia GST Purification Kit</b> , 5 ml, includes 2 Profinia GST buffer kits, 1 x 5 ml GST and 1 x 50 ml desalting cartridge
<b>Profinia Systems</b>			
620-1010	<b>Profinia Protein Purification System With Native IMAC Starter Kit</b> , 100–240 V, includes same as 620-1005 with Profinia software	620-0228	<b>Profinia Desalting Purification Kit</b> , 10 ml, includes Profinia desalting buffer kit, 2 x 10 ml desalting cartridges
620-1011	<b>Profinia Protein Purification System With GST Starter Kit</b> , 100–240 V, includes same as 620-1006 with Profinia software	620-0238	<b>Profinia Desalting Purification Kit</b> , 50 ml, includes 2 Profinia desalting buffer kits, 1 x 50 ml desalting cartridge
<b>Profinia Systems With Computers</b>			
620-1015	<b>Profinia Protein Purification System With Computer and Native IMAC Starter Kit</b> , 100–240 V, includes same as 620-1010 with computer	<b>Profinia Buffer Kits</b>	
620-1016	<b>Profinia Protein Purification System With Computer and GST Starter Kit</b> , 100–240 V, includes same as 620-1011 with computer	620-0221	<b>Profinia Native IMAC Buffer Kit</b> , includes purification buffers, cleaning and storage solutions; sufficient for 10 applications
<b>Profinia Accessories</b>			
620-0401	<b>Profinia Instrument Cooling Accessory</b> , includes 2 cooling units	620-0222	<b>Profinia Denaturing IMAC Buffer Kit</b> , includes purification buffers, cleaning and storage solutions, urea reagent; sufficient for 10 applications
620-0402	<b>Profinia Desalting Sample Loop</b> , 2 ml	620-0223	<b>Profinia GST Buffer Kit</b> , includes purification buffers, cleaning and storage solutions, glutathione reagent; sufficient for 10 applications
620-0403	<b>Profinia Desalting Sample Loop</b> , 10 ml	620-0224	<b>Profinia Desalting Buffer Kit</b> , includes purification buffers, cleaning and storage solutions; sufficient for 10 applications
620-0405	<b>Profinia Sipper Tube Replacement Kit</b> , includes 10 pieces of precut tubing	<b>Profinia Starter Kits</b>	
620-0410	<b>Profinia Instrument Accessory Kit</b> , includes cleaning tray, inline filter pack, 2 x 50 ml sample lids, 2 x 15 ml sample lids, bottle starter pack, waste/diluent bottle set	620-0229	<b>Profinia Native IMAC Starter Kit</b> , includes Profinia native IMAC buffer kit, 1 x 1 ml IMAC and 1 x 10 ml desalting cartridge, <i>E. coli</i> lysate
620-0231	<b>Bottle Starter Pack</b> , includes 4 x 125 ml buffer bottles, 4 x 250 ml buffer bottles, 8 buffer bottle lids	620-0230	<b>Profinia GST Starter Kit</b> , includes Profinia GST buffer kit, 1 x 1 ml GST and 1 x 10 ml desalting cartridge, <i>E. coli</i> lysate, glutathione reagent
620-0411	<b>Profinia pH Monitor Kit</b> , includes pH electrode, flow cell, mounting accessories	<b>Profinia Reagents</b>	
<b>Profinia Purification Kits</b>			
620-0225	<b>Profinia Native IMAC Purification Kit</b> , 1 ml, includes Profinia native IMAC buffer kit, 2 x 1 ml IMAC and 2 x 10 ml desalting cartridges	620-0220	<b>Profinia Bacterial Lysis/Extraction Reagent</b>
620-0235	<b>Profinia Native IMAC Purification Kit</b> , 5 ml, includes 2 Profinia native IMAC buffer kits, 1 x 5 ml IMAC and 1 x 50 ml desalting cartridge	620-0203	<b>Profinia His Antibody</b>
620-0227	<b>Profinia Denaturing IMAC Purification Kit</b> , 1 ml, includes Profinia denaturing IMAC buffer kit, 2 x 1 ml IMAC cartridges	620-0204	<b>Profinia GST Antibody</b>
		620-0233	<b>Profinia Control Lysate</b>
		620-0200	<b>Profinia Small Urea Pack</b> , 2 x 45 g
		620-0201	<b>Profinia Large Urea Pack</b> , 2 x 90 g
		620-0202	<b>Profinia Glutathione Pack</b> , 1.23 g

PowerPoint is a trademark of Microsoft Corporation.

Purification and preparation of fusion proteins and affinity peptides containing at least two adjacent histidine residues may require a license under U.S. patent 5,284,933 and US patent 5,310,663, including foreign patents (assignee: Hoffmann-La Roche).

Expression and purification of GST fusion proteins may require a license under U.S. patent 5,654,176 (assignee: Chemicon International).

**BIO-RAD**

**Bio-Rad  
Laboratories, Inc.**

Life Science  
Group

Web site [www.bio-rad.com](http://www.bio-rad.com) USA 800 4BIORAD Australia 61 02 9914 2800 Austria 01 877 89 01 Belgium 09 385 55 11 Brazil 55 21 3237 9400  
Canada 905 712 2771 China 86 21 6426 0808 Czech Republic 420 241 430 532 Denmark 44 52 10 00 Finland 09 804 22 00 France 01 47 95 69 65  
Germany 089 318 84 0 Greece 30 210 777 4396 Hong Kong 852 2789 3300 Hungary 36 1 455 8800 India 91 124 4029300 Israel 03 963 6050  
Italy 39 02 216091 Japan 03 5811 6270 Korea 82 2 3473 4460 Mexico 52 555 488 7670 The Netherlands 0318 540666 New Zealand 0508 805 500  
Norway 23 38 41 30 Poland 48 22 331 99 99 Portugal 351 21 472 7700 Russia 7 495 721 14 04 Singapore 65 6415 3188 South Africa 27 861 246 723  
Spain 34 91 590 5200 Sweden 08 555 12700 Switzerland 061 717 95 55 Taiwan 886 2 2578 7189 United Kingdom 020 8328 2000