

User Bulletin

ABI PRISM® 310, 3100 & 3100-*Avant* Genetic Analyzers,
Applied Biosystems 3130 & 3130xl Genetic Analyzers,
and Applied Biosystems 3730 & 3730xl DNA Analyzers

August 2006

SUBJECT: Introducing New 96-Well Fast Plate Adapters for Applied Biosystems Capillary Electrophoresis Systems

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Overview

Use of MicroAmp™ Fast Optical 96-Well Reaction Plate or MicroAmp™ Fast 96-Well Reaction Plate on an Applied Biosystems capillary electrophoresis (CE) instrument requires the specific Fast plate adapter designed for the particular instrument model. This document describes the part numbers for the adapters used with each instrument model and the key differences between the standard and Fast plate adapters. Except for the 310 Fast plate adapter, which is a single piece, adapters consist of a plate base and a matching plate retainer.

IMPORTANT! To avoid damage to the capillary (310) or capillary array (3100/3130/3730), use only Fast plate adapters with Fast 96-well reaction plates and only standard adapters with standard 96-well plates.

Materials

Materials for the ABI PRISM® 310 Genetic Analyzer

Item	Applied Biosystems Part Number
Fast Components	
Fast Plate Adapter for the ABI PRISM® 310 Genetic Analyzer	4370141
MicroAmp™ Fast 96-Well Reaction Plate (0.1 mL), 10 plates	4346907
MicroAmp™ Fast Optical 96-Well Reaction Plate with Barcode (0.1 mL), 20 plates	4346906
96-Well Plate Septa, 20 pack	4315933

Materials for the ABI PRISM 3100 and 3100-Avant Genetic Analyzers and Applied Biosystems 3130 and 3130xl Genetic Analyzers

Item	Applied Biosystems Part Number
Standard Components	
96-Well Standard Plate Base for 3130 and 3100 Series Genetic Analyzers, 4 pack	4317237
96-Well Standard Plate Retainer for 3130 and 3100 Series Genetic Analyzers, 4 pack	4317241
MicroAmp™ Optical 96-Well Reaction Plate, 10 plates	N8010560
MicroAmp™ Optical 96-Well Reaction Plate with Barcode, 20 plates	4306737
96-Well Plate Septa, 20 pack	4315933
Fast Components	
96-Well Fast Plate Base for 3130 and 3100 Series Genetic Analyzers, 4 pack	4367470
96-Well Fast Plate Retainer for 3130 and 3100 Series Genetic Analyzers, 4 pack	4367471
MicroAmp™ Fast 96-Well Reaction Plate (0.1 mL), 10 plates	4346907
MicroAmp™ Fast Optical 96-Well Reaction Plate with Barcode (0.1 mL), 20 plates	4346906
96-Well Plate Septa, 20 pack	4315933

Materials for the Applied Biosystems 3730 and 3730xl DNA Analyzers

Item	Applied Biosystems Part Number
Standard Components	
96-Well Plate Base (Septa Seal) for use on Applied Biosystems 3730 and 3730xl DNA Analyzers, 4 pack	4334873
96-Well Plate Retainer (Septa Seal) for use on Applied Biosystems 3730 and 3730xl DNA Analyzers, 4 pack	4334869
96-Well Plate Base (Heat Seal) for use on Applied Biosystems 3730 and 3730xl DNA Analyzers, 4 pack	4334875
96-Well Plate Retainer (Heat Seal) for use on Applied Biosystems 3730 and 3730xl DNA Analyzers, 4 pack	4334865

Item	Applied Biosystems Part Number
MicroAmp™ Optical 96-Well Reaction Plate, 10 plates	N8010560
MicroAmp™ Optical 96-Well Reaction Plate with Barcode, 20 plates	4306737
96-Well Plate Septa, 20 pack	4315933
Fast Components	
96-Well Fast Plate Base (Septa Seal) for use on Applied Biosystems 3730 and 3730x/ DNA Analyzers, 4 pack	4367469
96-Well Fast Plate Retainer (Septa Seal) for use on Applied Biosystems 3730 and 3730x/ DNA Analyzers, 4 pack	4367472
96-Well Fast Plate Base (Heat Seal) for use on Applied Biosystems 3730 and 3730x/ DNA Analyzers, 4 pack	4367473
96-Well Fast Plate Retainer (Heat Seal) for use on Applied Biosystems 3730 and 3730x/ DNA Analyzers, 4 pack	4367474
Heat Seal Film for Sequencing and Fragment Analysis Sample Plates	4337570
MicroAmp™ Fast 96-Well Reaction Plate (0.1 mL), 10 plates	4346907
MicroAmp™ Fast Optical 96-Well Reaction Plate with Barcode (0.1 mL), 20 plates	4346906
96-Well Plate Septa, 20 pack	4315933

Distinguishing the MicroAmp Fast and MicroAmp 96-Well Reaction Plate

The Fast 96-well reaction plates and the standard 96-well reaction plates differ in two ways.

- The wells of the standard plate have a volume of 0.2 mL; the wells of the Fast plate have a volume of 0.1 mL. The Fast plate also has shallower wells than those of the standard plate (Figure 1). The well-depth differences require that you use the plate adapter designed for the plate type that you use on the Applied Biosystems CE instrument. Otherwise, the capillaries (310) or capillary arrays (3100/3130/3730) are damaged.

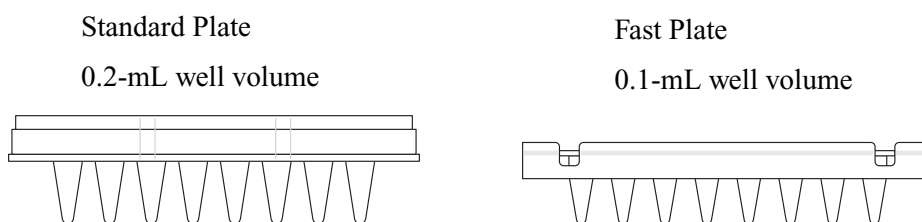


Figure 1 Standard and Fast 96-well reaction plate well volumes and depths

- The notch on the standard plate is at the A12 corner; the notch on the Fast plate is at the A1 corner of the plate (Figure 2).

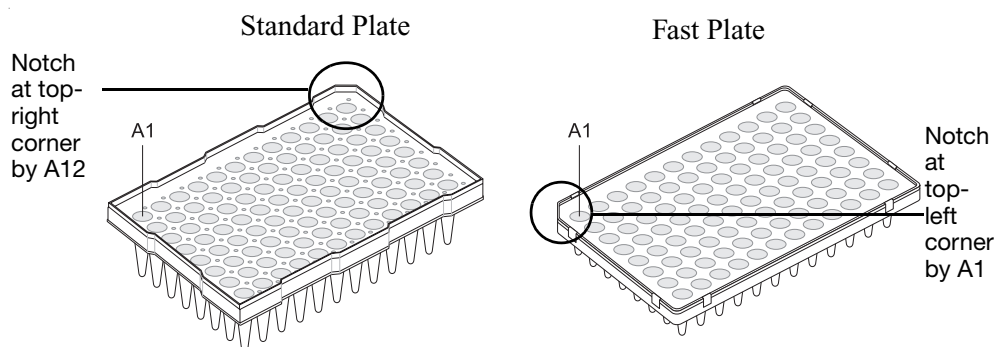


Figure 2 Standard and Fast 96-well reaction plate notch locations

**Assembling the
Fast Plate
Adapter for the
ABI PRISM 310
Genetic Analyzer**

The Fast plate adapter for the ABI PRISM® 310 Genetic Analyzer is designed to hold only the Fast 96-well plate. Standard 96-well plates cannot be used on the ABI PRISM 310 Genetic Analyzer.

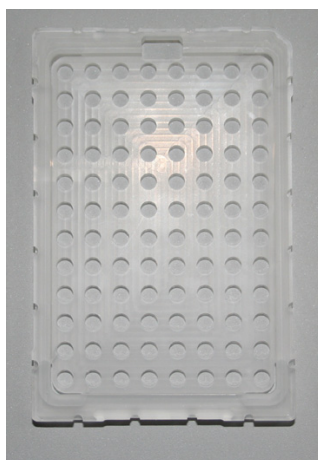


Figure 3 The Fast plate adapter

1. Place the Fast plate adapter on the autosampler tray holder. Match the notch on the autosampler tray holder to the rectangular hole in the Fast plate adapter (Figure 4). Press down on all four corners of the adapter to ensure proper seating.



Figure 4 The Fast plate adapter and autosampler tray holder assembly

2. Place the Fast plate on the adapter. Match the notch at A1 to the notch of the Fast plate adapter (Figure 5). Press down on all four corners of the adapter to ensure proper seating. Use a 96-well plate septa seal to seal samples before electrophoresis.



Figure 5 The Fast plate and Fast plate adapter assembly

Identifying the 96-Well Plate Adapters for the 3100/3130 Genetic Analyzers


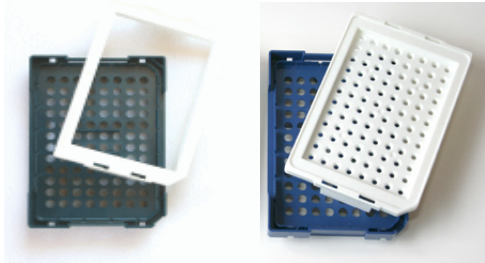


The Fast plate adapter for the 3100 and 3130 Genetic Analyzers is easily distinguishable from the standard plate adapter (see table below). However, the assembly procedure for the Fast plate adapter is identical to that of the standard plate adapters. Refer to the appropriate instrument user guide for more information about the assembly procedure.

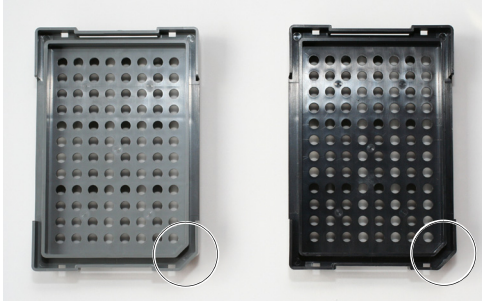
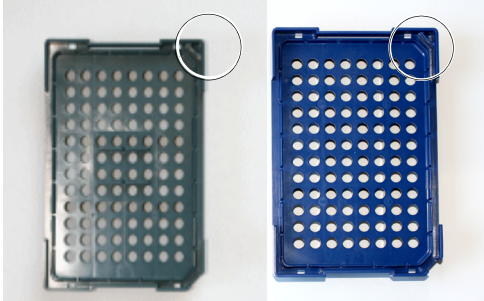
3100/3130 Genetic Analyzers Standard (0.2 mL) Plate Adapters	3100/3130 Genetic Analyzers Fast (0.1 mL) Plate Adapters
 <p>The standard plate adapter has a white retainer and black base.</p>	 <p>The Fast plate adapter has a blue retainer and blue base.</p>
 <p>The standard plate adapter has no labels.</p>	 <p>The Fast plate adapter has matching Fast labels on the short side of the plate assembly. IMPORTANT! Ensure labels match during assembly to avoid damage to the array.</p>
 <p>The A12 corner of the base is notched, matching the standard 96-well reaction plate.</p>	 <p>The A1 corner of the base is notched, matching the Fast 96-well reaction plate.</p>

Identifying the 96-Well Septa Seal Plate Adapters for the 3730/3730xl DNA Analyzers

IMPORTANT! Verify that your instrument has Data Collection 3.0 or later software versions. Do not use the Fast plates if you have Data Collection software version 1.0 or 2.0.

The Fast septa seal plate adapter for the 3730/3730xl DNA Analyzers is easily distinguished from the standard septa seal plate adapter (see table below). However, their assembly procedure is identical to that of the standard adapter plates. Refer to the appropriate instrument user guide for more information about the assembly procedure.

3730/3730xl Standard Plate Adapters	3730/3730xl Fast Plate Adapters
 <p data-bbox="196 898 574 961">Heat seal Plate adapter Septa seal Plate adapter</p> <p data-bbox="154 978 768 1083">The standard plate adapter for heat film sealed plates has a white retainer and gray base. The standard plate adapter for septa-sealed plates has a white retainer and black base.</p>	 <p data-bbox="829 869 1211 932">Heat seal Plate adapter Septa seal Plate adapter</p> <p data-bbox="800 942 1398 1050">The Fast plate adapter for heat film sealed plates has a white retainer and dark blue-green base. The Fast plate adapter for septa-sealed plates has a white retainer and blue base.</p>
 <p data-bbox="154 1287 626 1314">The standard plate adapters have no labels.</p>	 <p data-bbox="800 1472 1411 1528">The Fast plate adapters have Fast labels on the long side of the plate assembly.</p> <p data-bbox="800 1539 1404 1596">IMPORTANT! Ensure labels match during assembly to avoid damage to the array.</p>

3730/3730x/ Standard Plate Adapters	3730/3730x/ Fast Plate Adapters
 <p data-bbox="204 590 768 642">The A12 corner of the base is notched, matching the standard 96-well reaction plate.</p>	 <p data-bbox="847 590 1455 642">The A1 corner of the base is notched, matching the Fast 96-well reaction plate.</p> <p data-bbox="847 657 1455 737">Note: The Fast plate adapter has two notches on the A1 and A12 corners. The notch at the A12 corner orients the plates correctly in the 3730 stacker.</p>

Heat Seal Recommendations

- Do not use a heat seal film that is thicker than 1 mil after the heat sealing process.
- Do not use heat seal film containing adhesives or metals. Such materials may damage the instrument's piercing needles.
- Note that the MicroAmp Fast Reaction Plate may require a separate heat sealer setting than the standard reaction plate due to dimensional differences.

Contact your heat sealer manufacturer if you have questions regarding sealing the MicroAmp Fast or Microamp 96-Well Reaction Plate.

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