PCR Plate Adaptor
for ABI 3700 DNA Analyzer

This adaptor plate is designed to allow use of automation-friendly Bio-Rad skirted PCR plates in the ABI 3700 DNA analyzer. It can be used with Hard-Shell® and Microseal® 96-well PCR plates. The adaptor plate fits precisely in the model 3700 analyzer in the same location as the base plates supplied with the instrument.

The software for the model 3700 analyzer has parameters defining the depths of the wells, so the pipet can reach the sample without hitting the well bottoms. These parameters are factory-set for ABI plates. When using Bio-Rad plates with the PCR plate adaptor, new coordinates must be programmed into the 3700 database, as described below.

PCR Plate	Adaptor Needed	Software Modification
Hard-Shell 384-well plate	ABI adaptor 4309241	No change
Hard-Shell 96-well plate	Bio-Rad adaptor ADR-3700	Change z-axis coordinate
Microseal 96-well plate	Bio-Rad adaptor ADR-3700	Change z-axis coordinate

Note: No adaptor is needed to use Bio-Rad skirted PCR plates in the BaseStation® DNA fragment analyzer or in the AP Biotech MegaBACE DNA analyzer.

Instructions for Updating PCR Plate Parameters*
1. Open the D drive on the 3700 computer and navigate to: Perkin-Elmer/Abi/3700/bin/import.
2. Locate the init_defaults.txt file and make a backup copy (rename the copy, e.g., init_defaults_ABIplates). This will allow you to return to the original parameters if necessary.
3. Open the init_defaults.txt file.
4. Scroll down several pages to the lines of code that begin with >>PlateType, and choose 96-well. Look for the line of code entitled >physical_coordinates.
5. Replace the data on the line under >physical_coordinates with the respective values below. Note that only the second-to-last value requires changing, which will affect only the z-axis for pipetting (well depth).

Coordinate Set	Physical Coordinates						
Hard-Shell or Microseal 96-well	12 8	63000	99000	–74413	113470	–15800	–30500
Original coordinates 96-well	12 8	63000	99000	–74413	113470	–4204	–23876

6. Save the changes to the file and run the DBPurge Utility.
7. Once the DBPurge Utility has been run, the new coordinates will permanently be changed in the database. To verify the change(s), follow the directions on the next page.

Important Reminder: Once parameters are changed, ABI 96-well plates and adaptors cannot be used unless the old coordinates are restored to the database. The original parameter file should be saved in case ABI Plate files will be used in the future.

* Please note that the user assumes full responsibility for all consequences due to any changes in hardware and/or software settings of ABI equipment. Bio-Rad Laboratories, Inc. does its best to supply quality equipment and accurate information; however, the company cannot be held liable for any downtime, loss of productivity, loss of warranty coverage, etc.

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Verifying the Changes

1. You can verify the changes by opening an Oracle SQL worksheet (located under the start menu/programs/oracle enterprise manager/SQL worksheet).
2. Type: "Select physical_coordinates from platetype where NUM_WELLS=96" (omit quotation marks) and then click on the Execute command (lightning bolt).
3. The new values you entered should be listed correctly. If the correct values are not listed, repeat the update procedure described above.

Adaptor Plate

ADR-3700   Adaptor for ABI 3700 DNA Analyzer

PCR Plate Comparison Chart

Product	PCR Volumes	Product Highlights
Multiplate™ unskirted PCR plates MLP-series	5–125 µl	• High-performance, versatile, and inexpensive • Full-height vessels can easily be cut to desired size when running fewer than 96 samples • Available in 96- and 48-well formats
Microseal semi-skirted 96-well PCR plates MSS-series	5–125 µl	• Semi-skirt design adds stiffness and extra labeling surface • Compatible with instruments limited to full-height vessels (e.g., ABI cyclers and sequencers)
Microseal skirted 96- and 384-well PCR plates MSP-series	5–125 µl (96-well) 5–25 µl (384-well)	• High-throughput robot-friendly design in 1 component, thin-wall polypropylene • 96-well format is compatible with DNA Engine Opticon® real-time PCR detection systems
Hard-Shell skirted 96- and 384-well PCR plates HSP-series	5–125 µl (96-well) 5–30 µl (384-well)	• Unique 2-component design resists warping and shrinkage • Rigid skirt/deck for lab automation; thin-wall polypropylene wells for optimal thermal cycling • 96-well format is compatible with DNA Engine Opticon real-time PCR detection systems

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