

## E-Z 96 FastFilter Plasmid Kit

D1097-00	1 x 96 preps
D1097-01	4 x 96 preps
D1097-02	20 x 96 preps

**Manual Date: September 2020**  
**Revision Number: v7.0**

**For Research Use Only**

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# E-Z 96 FastFilter Plasmid DNA Kit

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# Introduction

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The E-Z 96 family of products is an innovative system that radically simplifies extraction and purification of nucleic acids from a variety of sources. Key to the system is Omega Bio-tek's proprietary HiBind® matrix that avidly, but reversibly, binds DNA or RNA under optimized conditions allowing proteins and other contaminants to be removed. Nucleic acids are easily eluted with deionized water or low salt buffer.

The E-Z 96 FastFilter Plasmid DNA Kit combines the power of HiBind® technology with the time-tested consistency of alkaline-SDS lysis of bacterial cells to deliver high-quality plasmid DNA. By using the E-Z 96 DNA Plate, up to 96 samples can be simultaneously processed in less than 90 minutes. The E-Z 96 Lysate Clearance Plate eliminates time-consuming centrifugation for the clearing of bacterial alkaline lysates. Although yields vary according to plasmid copy number, *E. coli* strain, and growth conditions, a 1 mL overnight culture in LB medium typically produces 3-15 µg high copy plasmid DNA.

## New In this Edition:

September 2020

- Centrifugation time increased in Low-Speed Centrifugation Protocol and cooling step was added after plate drying to improve DNA quality and yields.

August 2019

- General edits. No change to the procedure.

November 2017

- Centrifugation speeds and recommended drying times have been modified to improve overall kit quality.

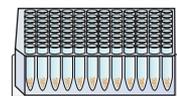
## Yield and Quality of DNA

Determine the absorbance of an appropriate dilution (20- to 50-fold) of the sample at 260 nm and then at 280 nm. The DNA concentration is calculated as follows:

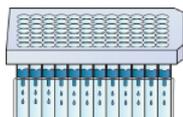
$$\text{DNA concentration} = \text{Absorbance 260} \times 50 \times (\text{Dilution Factor}) \mu\text{g/mL}$$

A ratio greater than 1.8 indicates greater than 90% nucleic acid. Alternatively, quantity (as well as quality) sometimes can be determined best by agarose gel/ethidium bromide electrophoresis by comparison to DNA samples of known concentrations. Typically, the majority of the DNA eluted is in monomeric supercoil form, though concatemers may also be present.

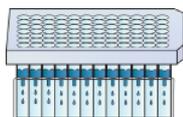
## Centrifugation Protocols



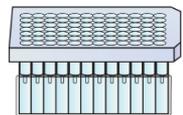
Resuspend  
Lyse  
Neutralize



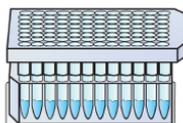
Clear lysate with  
Lysate Clearance Plate



Bind and  
Wash Twice

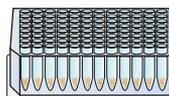


Dry Membrane

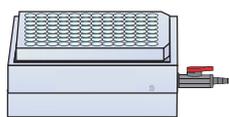


Elute

## Vacuum Protocol

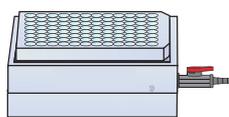


Resuspend  
Lyse  
Neutralize



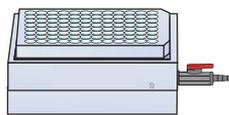
Clear lysate with  
Lysate Clearance Plate

Vacuum  
↓



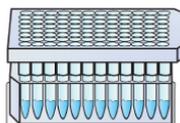
Bind and  
Wash Twice

Vacuum  
↓



Dry Membrane

Vacuum  
↓



Elute

# Kit Contents

E-Z 96 FastFilter Plasmid DNA Kit	D1097-00	D1097-01	D1097-02
Preps	1 x 96	4 x 96	20 x 96
E-Z 96 DNA Plate	1	4	20
E-Z 96 Lysate Clearance Plate	1	4	20
96-well Square-well Plate (2.2 mL)	1	2	4
96-well Microplate (500 $\mu$ L)	1	4	20
Sealing Film	4	16	80
Solution I	30 mL	110 mL	550 mL
Solution II	30 mL	110 mL	550 mL
Solution III	40 mL	170 mL	2 x 400 mL
HBC Buffer	40 mL	200 mL	4 x 200 mL
DNA Wash Buffer	50 mL	200 mL	3 x 200 mL
Elution Buffer	30 mL	125 mL	500 mL
RNase A	100 $\mu$ L	400 $\mu$ L	2 mL
User Manual	✓	✓	✓

## Storage and Stability

All of the E-Z 96 FastFilter Plasmid Kit components are guaranteed for at least 12 months from the date of purchase when stored as follows. Solution I (once RNase A is added) should be stored at 2-8°C. All other materials should be stored at room temperature. Solution II must be tightly capped when not in use.

## Preparing Reagents

1. Add the vial of RNase A to the bottle of Solution I and store at 2-8°C.
2. Dilute DNA Wash Buffer with 100% ethanol as follows and store at room temperature.

Kit	100% Ethanol to be Added
D1097-00	200 mL
D1097-01	800 mL
D1097-02	800 mL per bottle

3. Dilute HBC Buffer with 100% isopropanol as follows and store at room temperature.

Kit	100% Isopropanol to be Added
D1097-00	16 mL
D1097-01	78 mL
D1097-02	78 mL per bottle

4. Check Solution II and Solution III for precipitation before use. Redissolve any precipitation by warming to 37°C.

## Cleaning of 96-well Square-well Plates

The 96-well Square-well Plates supplied with this kit are reusable. To avoid cross-contamination, rinse the plates thoroughly with tap water after each use. Soak the plates in 0.5M HCl for 5 minutes then wash thoroughly with distilled water. The 96-well Square-well Plates also can be autoclaved following washing.

# Guidelines for Vacuum Manifold

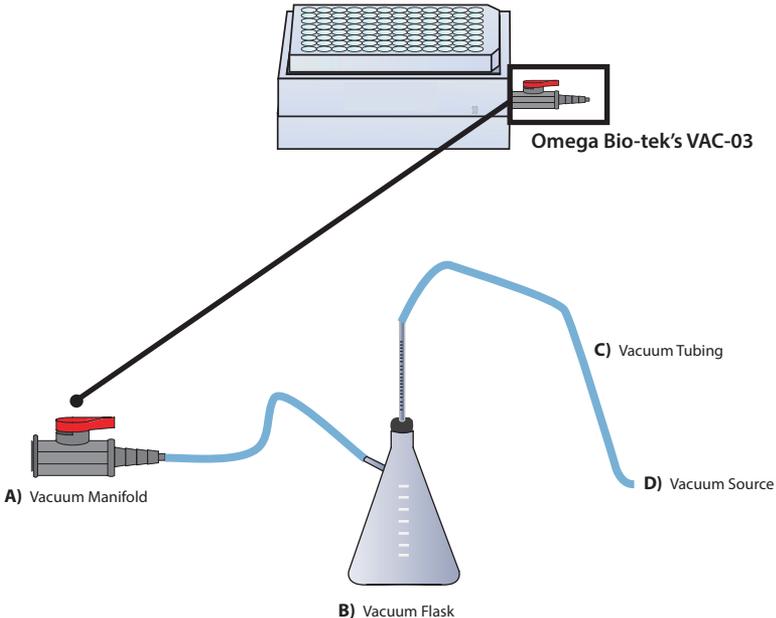
The following is required for use with the Vacuum Protocol:

- A) Vacuum Manifold (We recommend Omega Bio-tek's VAC-03)  
Other Compatible Vacuum Manifolds: Qiagen QIAvac96, Promega Vacman® 96, or similar 96-well manifolds for manual DNA purification
- B) Vacuum Flask
- C) Vacuum Tubing
- D) Vacuum Source (review tables below for pressure settings)

Manifold	Recommended Pressure (mbar)
VAC-03	-200 to -400

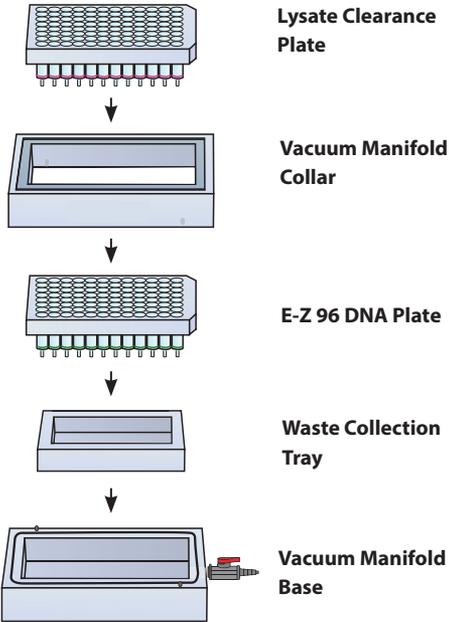
Conversion from millibars:	Multiply by:
Millimeters of Mercury (mmHg)	0.75
Kilopascals (kPa)	0.1
Inches of Mercury (inchHg)	0.0295
Torrs (Torr)	0.75
Atmospheres (atmos)	0.000987
Pounds per Square Inch (psi)	0.0145

## Illustrated Vacuum Setup

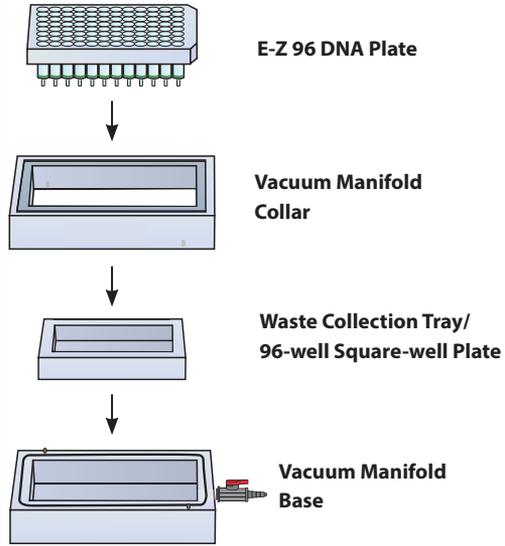


# Guidelines for Vacuum Manifold

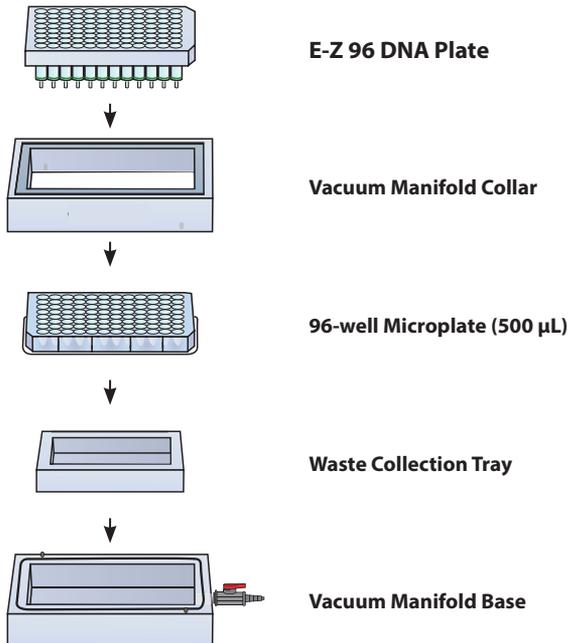
## Lysate Clearance Setup



## DNA Bind & Wash Setup



## Standard Elution Setup



# E-Z 96 FastFilter Plasmid DNA Kit - Vacuum Protocol

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## E-Z 96 FastFilter Plasmid DNA Kit - Vacuum Protocol

All centrifugation steps are performed at room temperature.

### Materials and Equipment to be Supplied by User:

- Centrifuge with swing bucket rotor capable of 2,000g
- Rotor adapter for 96-well Square-well Plates
- Standard vacuum manifold (Omega Bio-tek Cat# VAC-03 recommended)
- Oven or incubator capable of 70°C
- Sealing film or caps for 96-well Microplate
- 100% ethanol
- 100% isopropanol
- Optional: Sterile deionized water
- Optional: 3M NaOH

### Before Starting:

- Prepare Solution I, DNA Wash Buffer, and HBC Buffer according to “Preparing Reagents” section on Page 5
- Set the oven or incubator to 70°C

1. Grow 1.0-1.5 mL *E. coli* LB cultures in a 96-well Square-well Plate (2.2 mL) at 37°C with agitation (180-300 rpm) for 20-24 hours.

**Note:** It is strongly recommended that an endA negative strain of *E. coli* be used for routine plasmid isolation. Examples of such strains include DH5α® and JM109®.

2. Seal the plate with sealing film.
3. Centrifuge at 1,500-2,000g for 10 minutes at room temperature.
4. Remove and discard both the sealing film and supernatant.
5. Dry the plate by placing upside down on a paper towel to remove excess media.

# E-Z 96 FastFilter Plasmid DNA Kit - Vacuum Protocol

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6. Add 250  $\mu$ L Solution I/RNase A. Pipet up and down to completely resuspend the cell pellet.

**Note:** RNase A must be added to Solution I prior to use. Please see Page 5 for instructions.

7. Add 250  $\mu$ L Solution II. Mix by gently shaking and rotating the plate for 1 minute to obtain a cleared lysate. A 2-3 minute incubation at room temperature may be necessary.

**Note:** Avoid vigorous mixing as doing so will shear chromosomal DNA and lower plasmid purity. Store Solution II tightly capped when not in use.

8. Add 350  $\mu$ L Solution III. Dry the top of the plate with a paper towel. Seal the plate with sealing film. Invert the plate gently 5-6 times until a flocculent white precipitate forms.

## Optional Protocol for Plate Equilibration:

1. Prepare the vacuum manifold according to manufacturer's instructions. For Omega's VAC-03 manifold, set up the manifold as follows:
    - a. Place the Waste Collection Tray inside the Vacuum Manifold Base.
    - b. Place the Vacuum Manifold Collar squarely over the base.
    - c. Place the E-Z 96 DNA Plate over the Vacuum Manifold Collar.
    - d. Seal the unused wells with sealing film (not provided).
  2. Add 100  $\mu$ L 3M NaOH to each well.
  3. Turn on the vacuum source to draw the NaOH through the plate.
  4. Turn off the vacuum.
  5. Remove the sealing film.
  6. Set the E-Z 96 DNA Plate aside and disassemble the manifold.
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9. Set up the manifold for Lysate Clearance as follows (refer to Page 7 for illustrations):
    - a. Place the Waste Collection Tray into the Vacuum Manifold Base.
    - b. Place the E-Z 96 DNA Plate on top of the Waste Collection Tray.
    - c. Place the Vacuum Manifold Collar squarely over the base.
    - d. Place the E-Z 96 Lysate Clearance Plate over the Vacuum Manifold Collar.
    - e. Seal the unused wells with sealing film.

## E-Z 96 FastFilter Plasmid DNA Kit - Vacuum Protocol

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10. Immediately transfer the lysate from Step 8 to the E-Z 96 Lysate Clearance Plate.
11. Let sit for 5 minutes. The white precipitate should float to the top.
12. Turn on the vacuum until all the lysate passes through the E-Z 96 Lysate Clearance Plate.
13. Turn off the vacuum.
14. Discard the E-Z 96 Lysate Clearance Plate.
15. Carefully transfer the E-Z 96 DNA Plate containing the cleared lysate onto the vacuum manifold collar (refer to Page 7 for illustrations).
16. Seal the unused wells of E-Z 96 DNA Plate with sealing film.
17. Turn on the vacuum until all the lysate passes through the E-Z 96 DNA Plate.
18. Turn off the vacuum.
19. Add 500  $\mu$ L HBC Buffer.  
**Note:** HBC Buffer must be diluted with 100% isopropanol before use. Please see Page 5 for instructions.
20. Turn on the vacuum until all the HBC Buffer passes through the E-Z 96 DNA Plate.
21. Turn off the vacuum.
22. Add 750  $\mu$ L DNA Wash Buffer to each well.  
**Note:** DNA Wash Buffer must be diluted with 100% ethanol prior to use. Please see Page 5 for instructions.

## E-Z 96 FastFilter Plasmid DNA Kit - Vacuum Protocol

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23. Turn on the vacuum until all the DNA Wash Buffer passes through the E-Z 96 DNA Plate.
24. Repeat Steps 21-23 for a second DNA Wash Buffer wash step.
25. Continue to apply vacuum pressure for 10 minutes.
26. Remove the E-Z 96 DNA Plate from the vacuum manifold and place in an oven or incubator at 70°C for 30 minutes.
27. Remove the E-Z 96 DNA Plate from the oven. Cool the plate at room temperature for 5 minutes.
28. Set up the manifold for Elution as follows (refer to Page 7 for illustrations):
  - a. Place the Waste Collection Tray into the Vacuum Manifold Base.
  - b. Place a 96-well Microplate (500  $\mu$ L) on top of the Waste Collection Tray.
  - c. Place the Vacuum Manifold Collar squarely over the base.
  - d. Place the E-Z 96 DNA Plate over the Vacuum Manifold Collar.
29. Add 150-200  $\mu$ L Elution Buffer (10 mM Tris-HCl, pH 8.5) or sterile deionized water to each well.
30. Let sit for 2 minutes at room temperature.
31. Turn on the vacuum for 5-10 minutes to elute the DNA from the plate.
32. Turn off the vacuum.
33. Disassemble the vacuum manifold, remove the 96-well Microplate containing the eluted DNA, and seal with caps or sealing film (not provided).
34. Store at -20°C.

# E-Z 96 FastFilter Plasmid DNA Kit - High-Speed Centrifugation Protocol

## E-Z 96 FastFilter Plasmid DNA Kit - High-Speed Centrifugation Protocol

All centrifugation steps are performed at room temperature. High-speed centrifugation requires a centrifuge capable of 5,500g and equipped with a plate rotor having a clearance height of at least 75 mm to accommodate the combined configuration of E-Z 96 DNA Plate/96-well deep-well plate.

### Materials and Equipment to be Supplied by User:

- Centrifuge with swing bucket rotor capable of 5,500g
- Rotor adapter for 96-well Square-well Plates
- 96-well deep-well plates
- Sealing film or caps for 96-well Microplate
- 100% ethanol
- Isopropanol
- Optional: Sterile deionized water
- Optional: 3M NaOH

### Before Starting:

- Prepare Solution I, DNA Wash Buffer, and HBC Buffer according to “Preparing Reagents” section on Page 5
- ***Important: The ramp or acceleration speed for centrifuge should be set to a low acceleration. If the centrifuge has a scale of 1-10, set to 3.***

1. Grow 1.0-1.5 mL *E. coli* LB cultures in a 96-well Square-well Plate (2.2 mL) at 37°C with agitation (180-300 rpm) for 20-24 hours.

**Note:** It is strongly recommended that an endA negative strain of *E. coli* be used for routine plasmid isolation. Examples of such strains include DH5α® and JM109®.

2. Seal the plate with sealing film.
3. Centrifuge at 1,500-2,000g for 5 minutes at room temperature.
4. Remove and discard both the sealing film and supernatant.

# E-Z 96 FastFilter Plasmid DNA Kit - High-Speed Centrifugation Protocol

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5. Dry the plate by placing upside down on a paper towel to remove excess media.
6. Add 250  $\mu$ L Solution I/RNase A. Pipet up and down to completely resuspend the cell pellet.

**Note:** RNase A must be added to Solution I prior to use. Please see Page 5 for instructions.

7. Add 250  $\mu$ L Solution II. Mix by gently shaking the plate for 1 minute to obtain a cleared lysate. A 2-3 minute incubation at room temperature may be necessary.

**Note:** Avoid vigorous mixing as doing so will shear chromosomal DNA and lower plasmid purity. Store Solution II tightly capped when not in use.

8. Add 350  $\mu$ L Solution III. Dry the top of the plate with a paper towel. Seal the plate with sealing film. Invert the plate gently 5-6 times until a flocculent white precipitate forms.

## Optional Protocol for Plate Equilibration:

1. Place a E-Z 96 DNA Plate on to a 96-well deep-well plate (not provided).
  2. Add 100  $\mu$ L 3M NaOH to each well.
  3. Centrifuge at 3,000-5,000*g* for 3 minutes.
  4. Set the E-Z 96 DNA Plate aside, discard the filtrate, and reuse the 96-well deep-well plate.
9. Place a E-Z 96 Lysate Clearance Plate onto a 96-well deep-well plate (not provided).
  10. Transfer all of the lysate from Step 8 to the E-Z 96 Lysate Clearance Plate.
  11. Let sit for 2-3 minutes at room temperature. A white precipitate should float to the top.

**Important:** The ramp or acceleration speed for centrifuge should be set to a low acceleration. If the centrifuge has a scale of 1-10, set to 3.

12. Centrifuge at 5,500*g* for 5 minutes.

# E-Z 96 FastFilter Plasmid DNA Kit - High-Speed Centrifugation Protocol

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13. Discard the E-Z 96 Lysate Clearance Plate.
14. Place the E-Z 96 DNA Plate on top of the 96-well Square-well Plate (provided).
15. Transfer the cleared cell lysate from Step 12 into the E-Z 96 DNA Plate.
16. Centrifuge at 5,500g for 5 minutes.
17. Discard the filtrate and reuse the 96-well Square-well Plate.
18. Add 500  $\mu$ L HBC Buffer.

**Note:** HBC Buffer must be diluted with 100% isopropanol before use. Please see Page 5 for instructions.

19. Centrifuge at 5,500g for 5 minutes.
20. Discard the filtrate and reuse the 96-well Square-well Plate.
21. Add 750  $\mu$ L DNA Wash Buffer.

**Note:** DNA Wash Buffer must be diluted with 100% ethanol prior to use. Please see Page 5 for instructions.

22. Centrifuge at 5,500g for 5 minutes.
23. Discard the filtrate and reuse the 96-well Square-well Plate.
24. Repeat Steps 21-23 for a second DNA Wash Buffer wash step.
25. Place the empty E-Z 96 DNA plate on the 96-well Square-well Plate and centrifuge at 5,500g for 10 minutes to completely dry the plate.

## E-Z 96 FastFilter Plasmid DNA Kit - High-Speed Centrifugation Protocol

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26. Remove the 96-well Square-well Plate.
27. Place the E-Z 96 DNA Plate onto a 96-well Microplate (500  $\mu$ L).
28. Add 150-200  $\mu$ L Elution Buffer (10 mM Tris-HCl, pH 8.5) or sterile deionized water to each well.

**Note:** The estimated retention volume is  $\sim$ 40  $\mu$ L per well.

29. Let sit for 2 minutes at room temperature.
30. Centrifuge at 5,500*g* for 5 minutes.
31. Seal the 96-well Microplate with caps or sealing film (not provided).
32. Store at -20°C.

# E-Z 96 FastFilter Plasmid DNA Kit - Low-Speed Centrifugation Protocol

## E-Z 96 FastFilter Plasmid DNA Kit - Low-Speed Centrifugation Protocol

All centrifugation steps are performed at room temperature. Low-speed centrifugation requires a centrifuge capable of 2,000g and equipped with a plate rotor having a clearance height of at least 75 mm to accommodate the combined configuration of E-Z 96 DNA Plate/96-well deep-well plate.

### Materials and Equipment to be Supplied by User:

- Centrifuge with swing bucket rotor capable of 2,000g
- Rotor adapter for 96-well Square-well Plates
- Oven or incubator capable of 70°C
- 96-well deep-well plates
- Sealing film or caps for 96-well Microplate
- 100% ethanol
- 100% isopropanol
- Optional: Sterile deionized water
- Optional: 3M NaOH

### Before Starting:

- Prepare Solution I, DNA Wash Buffer, and HBC Buffer according to “Preparing Reagents” section on Page 5
  - Set an oven or incubator to 70°C
  - **Important: The ramp or acceleration speed for centrifuge should be set to a low acceleration. If the centrifuge has a scale of 1-10, set to 3.**
1. Grow 1.0-1.5 mL *E. coli* LB cultures in a 96-well Square-well Plate (2.2 mL) at 37°C with agitation (180-300 rpm) for 20-24 hours.  
  
**Note:** It is strongly recommended that an endA negative strain of *E. coli* be used for routine plasmid isolation. Examples of such strains include DH5α® and JM109®.
  2. Seal the plate with sealing film.
  3. Centrifuge at 1,500-2,000g for 10 minutes at room temperature.
  4. Remove and discard both the sealing film and supernatant.

# E-Z 96 FastFilter Plasmid DNA Kit - Low-Speed Centrifugation Protocol

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5. Dry the plate by placing upside down on a paper towel to remove excess media.
6. Add 250  $\mu$ L Solution I/RNase A. Pipet up and down to completely resuspend the cell pellet.

**Note:** RNase A must be added to Solution I prior to use. Please see Page 5 for instructions.

7. Add 250  $\mu$ L Solution II. Mix by gently shaking the plate for 1 minute to obtain a cleared lysate. A 2-3 minute incubation at room temperature may be necessary.

**Note:** Avoid vigorous mixing as doing so will shear chromosomal DNA and lower plasmid purity. Store Solution II tightly capped when not in use.

8. Add 350  $\mu$ L Solution III. Dry the top of the plate with a paper towel. Seal the plate with sealing film. Invert the plate gently 5-6 times until a flocculent white precipitate forms.

## Optional Protocol for Plate Equilibration:

1. Place a E-Z 96 DNA Plate on to a 96-well deep-well plate (not provided).
  2. Add 100  $\mu$ L 3M NaOH to each well.
  3. Centrifuge at 2,000-3,000*g* for 10 minutes.
  4. Set the E-Z 96 DNA Plate aside, discard the filtrate, and reuse the 96-well deep-well plate.
9. Place a E-Z 96 Lysate Clearance Plate onto a 96-well deep-well plate (not provided).
  10. Transfer all of the lysate from Step 8 to the E-Z 96 Lysate Clearance Plate.
  11. Let sit for 2-3 minutes at room temperature. A white precipitate should float to the top.

**Important:** The ramp or acceleration speed for centrifuge should be set to a low acceleration. If the centrifuge has a scale of 1-10, set to 3.

12. Centrifuge at 2,000*g* for 10 minutes.

## E-Z 96 FastFilter Plasmid DNA Kit - Low-Speed Centrifugation Protocol

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13. Discard the E-Z 96 Lysate Clearance Plate.
14. Place the E-Z 96 DNA Plate on top of the 96-well Square-well Plate.
15. Transfer the cleared cell lysate from Step 12 into the E-Z 96 DNA Plate.
16. Centrifuge at 2,000g for 10 minutes.
17. Discard the filtrate and reuse the 96-well Square-well Plate.
18. Add 500  $\mu$ L HBC Buffer.  
  
**Note:** HBC Buffer must be diluted with 100% isopropanol before use. Please see Page 5 for instructions.
19. Centrifuge at 2,000g for 10 minutes.
20. Discard the filtrate and reuse the 96-well Square-well Plate.
21. Add 750  $\mu$ L DNA Wash Buffer.  
  
**Note:** DNA Wash Buffer must be diluted with 100% ethanol prior to use. Please see Page 5 for instructions.
22. Centrifuge at 2,000g for 10 minutes.
23. Discard the filtrate and reuse the 96-well Square-well Plate.
24. Repeat Steps 21-23 for a second DNA Wash Buffer wash step.
25. Place the empty E-Z 96 DNA plate on the 96-well Square-well Plate and centrifuge at maximum speed for 10 minutes to dry the plate.

## E-Z 96 FastFilter Plasmid DNA Kit - Low-Speed Centrifugation Protocol

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26. Discard any residual filtrate and reuse the 96-well Square-well Plate.
27. Place the E-Z 96 DNA Plate in an oven or incubator set to 70°C for 30 minutes.
28. Remove the E-Z 96 DNA Plate from the oven. Cool the plate at room temperature for 5 minutes.
29. Remove the 96-well Square-well Plate.
30. Place the E-Z 96 DNA Plate onto a 96-well Microplate (500 µL).
31. Add 150-200 µL Elution Buffer (10 mM Tris-HCl, pH 8.5) or sterile deionized water to each well.  
  
**Note:** The estimated retention volume is ~55 µL per well.
32. Let sit for 2 minutes at room temperature.
33. Centrifuge at 2,000g for 10 minutes.
34. Seal the 96-well Microplate with caps or sealing film (not provided).
35. Store at -20°C.

# Troubleshooting Guide

Please use this guide to troubleshoot any problems that may arise. For further assistance, please contact the technical support staff, toll free, at (800-832-8896).

## Possible Problems and Suggestions

Problem	Cause	Solution
Low DNA yields	Poor cell lysis	<p>Only use LB or YT medium containing antibiotic(s). Do not use more than 2 mL culture with high copy plasmids.</p> <p>Cells may not be resuspended adequately prior to addition of Solution II. Mix cell suspension to completely disperse.</p> <p>Increase incubation time with Solution II to obtain a clear lysate.</p> <p>Solution II, if not tightly closed, may need to be replaced.</p>
	Bacterial culture overgrown or not fresh	Reduce quantity of starting material.
	Low copy number plasmid used	Low copy number plasmids may yield as little as 0.1 µg DNA from a 1 mL overnight culture. Increase culture volume to 3 mL.
Problem	Cause	Solution
No DNA eluted	DNA Wash Buffer not diluted with ethanol	Prepare DNA Wash Buffer according to instructions on Page 5.
	HBC Buffer not diluted with isopropanol	Prepare HBC Buffer according to instructions on Page 5.
Problem	Cause	Solution
High molecular weight DNA contamination of product	Over mixing of cell lysate upon addition of Solution II.	Do not vortex or mix aggressively after adding Solution II. Adequate mixing is obtained by simply inverting and rotating the plate.

## Troubleshooting Guide

Problem	Cause	Solution
Low elution volume in corner wells	Centrifugation speed is not evenly applied	Lower the acceleration speed of centrifuge.
Optical densities do not agree with DNA yield on agarose gel	Trace contaminants eluted from column increase $A_{260}$	Make sure to wash plate as instructed. Alternatively, rely on agarose gel/ethidium bromide electrophoresis for quantification.
Problem	Cause	Solution
RNA visible on agarose gel	RNase A not added to Solution I	Add 1 vial of RNase to each bottle of Solution I.
Problem	Cause	Solution
Plasmid DNA floats out of well while loading agarose gel	Ethanol not completely removed from column following wash steps	Follow the drying step to completely dry the HiBind® matrix.
Problem	Cause	Solution
Plasmid DNA will not perform in downstream application	Traces of ethanol remain on column prior to elution	The E-Z 96 DNA Plate must be washed with 100% ethanol and dried before elution. Ethanol precipitation may be required following elution.
	DNA is permanently denatured	Cell lysis process should not be over 5 minutes. It may cause DNA to be permanently denatured.

## Notes:

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PCR is a patented process of Hoffman-La Roche. Use of the PCR process requires a license.

**Notes:**

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## AVAILABLE FORMATS



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96-Well Silica Plates



Mag Beads

## SAMPLE TYPES



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Plasmid



Cultured Cells



Plant & Soil



NGS Clean Up



Tissue



FFPE



Fecal Matter



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