

# AutoDTR™ 96-Well Plate Kit

Product	Catalog #	Purifications
AutoDTR™ 96-Well Plate Kit (2 Plates)	16450	192
AutoDTR™ 96-Well Plate Kit (10 Plates)	16452	960
AutoDTR™ 96-Well Plate Kit (50 Plates)	16454	4800

## Description

AutoDTR™ 96-Well Plate Kit is based on a proprietary technology that offers a fast and simple method for automated sequencing reaction purification. It utilizes a surface modified plate and a single solution for binding and washing.

Kit Components	16450	16452	16454
AutoDTR™ 96-Well Plate	2 Plates (PN# 4050332)	10 Plates (2 X 4050333)	50 Plates (2 X 4050238)
AutoDTR™ Binding Solution	24 ml (PN# 4050334)	120 ml (1 X 4050335)	480 ml (4 X 4050335)

## Storage and Stability Conditions

Store kit components at room temperature.

After addition of 100% Ethanol to the AutoDTR™ Binding Solution Concentrate, store the mixture at room temperature.

## Materials Required

- 100% Ethanol
- Optical Plate

## Quality Control

The quality of the AutoDTR™ 96-Well Plate Kit components are tested on a lot-to-lot basis evaluating average Phred20 scores, removal of unreacted dye terminators, and signal intensities.

## Before Starting

### Prepare AutoDTR™ Binding Solution

Add the appropriate volume of 100% Ethanol to Binding Solution and mix well. Please keep bottle tightly sealed to avoid evaporation.

Binding Solution Volume	100% Ethanol Volume
24 ml	76 ml
120 ml	380 ml

## Automation Processing

Total volume of Binding Solution needed to process the first plate is 40 ml. For each additional plate being processed add 8 ml of Binding Solution.

- 8 ml of prepared Binding Solution is needed for each 96-well plate processed.
- 30 ml of prepared Binding Solution excess is needed for automation.
- Use only the required volume of Binding Solution needed to process your plates.
- Discard any remaining Binding Solution used in automated processing.**

Perform Mixing operations at maximum speed.

## General Notes

The volume of sequencing reaction that can be purified on the AutoDTR 96-Well Plate is 10 µl.

Sequencing Reaction Volume (µl)	Binding Solution Volume (µl)	Wash Volume (µl)	Elution Volume (µl)
10	24	40	35

# AutoDTR™ 96-Well Plate Kit

## Recommended Protocol

1. **Transfer samples to the AutoDTR™ 96-Well Plate.**
2. **Add 24 µl of Binding Solution. Mix 20 times.**
3. **Incubate on the deck for 10 minutes.**
4. **Aspirate and discard supernatant.**
5. **Wash with 40 µl of Binding Solution. Mix 2 times.**
6. **Aspirate and discard supernatant.**
  - It is important to ensure that all of the liquid is removed. This can be done by aspirating 45 µl of supernatant.
7. **Dry plate.**
  - Invert the plate on a paper towel and centrifuge at 1000 x g for 3 minutes. After centrifugation air-dry plate on the deck for 10 minutes.
  - Alternatively, the plate can be air-dried on the deck for 45 minutes.
8. **Add 35 µl of dH<sub>2</sub>O to elute the sample. Mix 20 times.**
9. **Transfer samples into Optical Plate for sequencing.**

## Additional Notes

Conversion of RCF to RPM Calculation:

An accurate determination of the centrifugation speed is very important. The relative centrifugal force (RCF) specified in the protocol is converted to revolutions per minute (RPM) using the following formula:

$$RCF = 1.12 r \left( \frac{RPM}{1000} \right)^2$$

The radius, *r*, is equal to the distance in millimeters between the axis of rotation and the base of the AutoDTR plate when the plate is placed in the plate carrier in the centrifuge bucket simulating the centrifugation position (vertical arrangement). After measuring the radius, the appropriate RPM setting is calculated as follows:

$$RPM = 1000 \sqrt{\frac{RCF}{1.12 r}}$$

To achieve RCF = 1000 x g:

$$RPM = 29,881 \sqrt{\frac{1}{r}}$$

