

Producing DE50 droplets

Materials

- Xdrop®
- Xdrop DE50 Cartridge (pictured)
- Xdrop DE Gasket
- Xdrop DE Oil I ●
- Outer phase (e.g., custom growth medium with OptiPrep™)
- Sample mix (e.g., living cells in custom growth medium with OptiPrep)



Important: If you are using a custom buffer or a medium for the first time, perform a test run as described in Chapter 3 of the Xdrop Manual.

Method

1. Leave the cartridge in its closed original packaging for about 20 min to reach room temperature. Allow all reagents listed under Materials to reach room temperature before loading.
2. Unpack the cartridge and load the lanes to be used in this order. Refer to image above for well positions. Pipette onto the side of the wells to avoid introducing air bubbles.
 - I. Load **400 µl** of your outer phase into well **#A**
 - II. Load **40 µl** of your outer phase onto the shelf in the collection well **#D**
 - III. Load **100 µl** of your sample mix into well **#C**
 - IV. Load **200 µl** of Xdrop DE Oil I Droplet Oil ● into well **#B**
3. Place the white Xdrop DE Gasket onto the cartridge, using the angled corner to orient the gasket.
4. Push the Start button at the front of the Xdrop instrument and press [Open](#).
5. Position the cartridge in the instrument drawer and press [Close](#) → [Next](#) → [DE](#) → [DE50](#).
6. Select [Buffers](#) or [Media](#) (see the Xdrop Manual for more information).
7. Select the lanes to be used (the green color indicates that the lane is selected) and press [Run](#).
8. When the message “Your droplets are ready” is shown, press [Finish](#) → [Open](#).
9. Remove the cartridge from the instrument, press [Close](#) and push the Start button to power down.
10. Collect the DE50 droplets in their buffer from the collection well **#D** (white layer at the bottom of the well).
11. Wash residual DE50 droplets from the collection well using **200 µl** of outer phase.

Please refer to the Xdrop Manual for more information.

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