

Using the Xdrop[®] Well Insert for cell workflows

The Xdrop Well Insert enables the user to add two sample mixtures in the sample well (well C) of Xdrop DE20 or DE50 Cartridges. These solutions then only mix when droplet production is initiated. This permits the co-encapsulation of two different cell types (e.g., immune cells and their target in DE50 droplets) with no significant interaction between the cells prior to encapsulation.

Materials

- Xdrop or Xdrop Sort
- Xdrop Well Insert (pictured)
- Xdrop DE20 or DE50 Cartridge
- Appropriate reagents for your workflow



Method

Note: Always wear gloves when handling the Xdrop Well Insert.

Note: The Xdrop Well Insert is single use.

1. Remove the Xdrop Well Insert from its packaging and place it into well C (the sample well) of your Xdrop DE20 or DE50 Cartridge with the center spine aligned vertically, as shown in the photo.
2. Firmly press down on the Xdrop Well Insert to ensure secure placement.
3. Load the cartridge as described in the Xdrop manual version 6.1 or later (for Xdrop users) or Xdrop Sort manual version 4.0 or later (for Xdrop Sort users), with the following modification.
 - a. For Xdrop DE20 Cartridges: Add 40 μ l of sample of one sample to one side of the Xdrop Well Insert and 40 μ l of the other sample to the other side, giving a total volume of 80 μ l. Gently pipette the sample down the inner walls of the insert.
 - b. For Xdrop DE50 Cartridges: Add 60 μ l of one sample to one side of the Xdrop Well Insert and 60 μ l of the other sample to the other side, giving a total volume of 120 μ l. Gently pipette the sample down the inner walls of the insert.
4. Cover with the Xdrop DE Gasket and place the cartridge in your Xdrop or Xdrop Sort instrument. Then select the appropriate program.

Please refer to the Xdrop Manual or Xdrop Sort Manual for more information.

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