

Primo Vision

WOW (Well-Of-The-Well) embryo culture dish

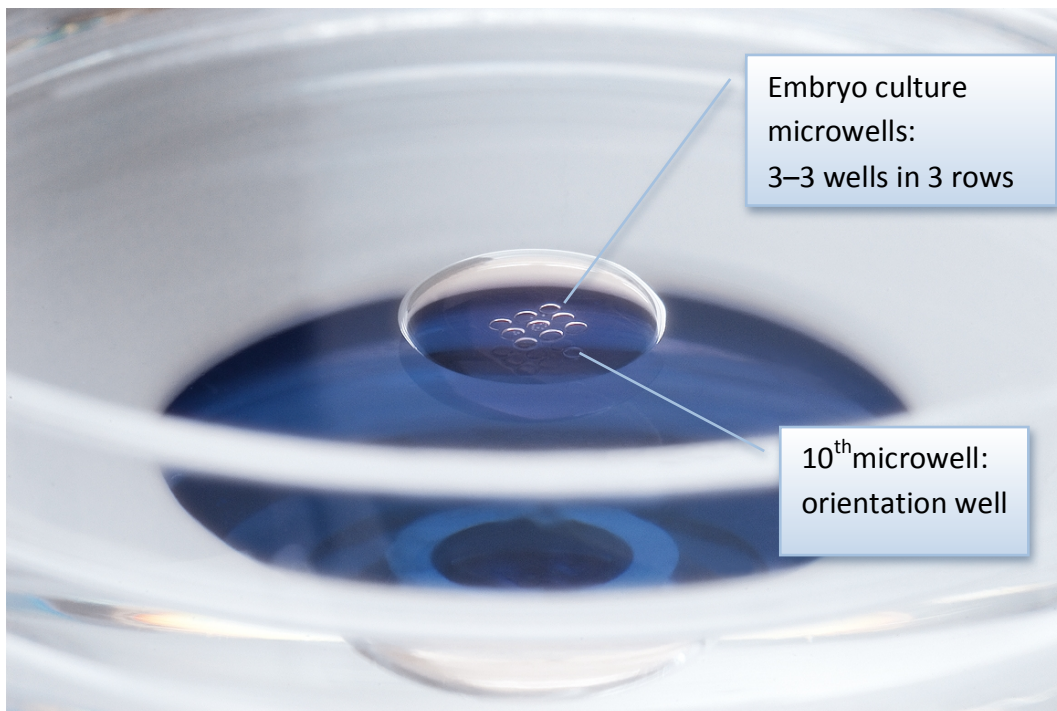
User Manual



The microwell culture dish (WOW dish)

Well-of-the-well (WOW) Petri dishes are custom-made sterile, CE marked and officially 1cell mouse embryo tested, disposable, specially adjusted micro-well culture dishes for in vitro embryo culture in Primo Vision System.

When operating the Primo Vision System, it is crucial to identify each embryo individually, and to keep each embryo in the field of view of the Primo Vision Microscope. For this reason it is recommended to use a special Petri dish which contains “wells” for proper placement of the embryos. The arrangement of these microwells allows easy adjusting, tracking and identifying the embryos and also confers improved culture conditions for the time of the culture period as it was published in many scientific papers (originally described by Vajta, in 1998).



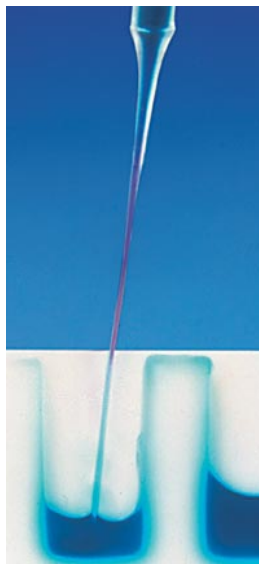
The microwells form a matrix of 3 rows with 3 wells each (or 4x4, 4x5, 5x5 in other dish types), plus 1 extra (orientation) well. This extra well serves to identify the position of the dish. Use this orientation well to orient the dish by positioning it under the lamp console with this well pointing to the opposite side, away from the lamp console of the Primo Vision Microscope. In this case, the top row on the computer screen will correspond to the 1st row of the 3x3 matrix. Always use the dish in this orientation to ensure the reliable identification of the embryos.

The WOW embryo culture dish is to be used with 30-50 μl of the proper embryo culture media, corresponding the laboratory rules and regulations. Put the given amount of culture media onto the middle of the WOW dish, over the wells. The dome of the drop should be as flat as possible: the rim around the wells helps to achieve this. Practically when one prepares the micro-drop she/he should start to place the drop next to the rim around the wells, and help the drop to spread over the rim. As there might be differences in types or batches of media, the amount can of course be changed and adjusted. Try to use the least amount that spreads evenly in the recession, containing the wells.

After this, approximately 2.5 - 3 ml oil shall be overlaid, to cover the whole droplet. This is important, as it will not only affect image quality, but culture conditions as well.

Some tiny bubbles might be trapped in the bottom of the wells, these shall be removed by the use of special pipets: e.g. a stripper, or flexipette or fine gel loading tips. The bubbles shall also be removed from the top of the drop and the oil, because these can float into the field of view of the microscope and reduce image quality.

Other possibility is to load the microwells with culture media well by well, using a fine pipette, eg. a gel loading tip. In this way all the wells will be filled up completely, without air bubbles. The drop then can be enlarged to the desired volume and size.



loading the culture media well by well

The prepared micro-drop culture dish shall be equilibrated in the incubator overnight - as it is described in the SOP of the lab, then it can be used for embryo culture.

The embryos are placed one by one into the wells by fine pipetting. It needs some seconds for them to settle in the bottom of the wells. Then the dish should be carefully taken to the incubator

and placed onto the sample holder of the microscope. By doing this, one needs to be extra careful, otherwise embryos might migrate between the wells. For stable carrying, firm hand, or a lid of a large petri dish, or a pre-warmed plate is used. This step needs some practice. After getting the hang of it, embryo migration is not an issue.

For more information about the WOW dish or the Primo Vision time-lapse embryo monitoring system, please visit our website at www.cryo-innovation.com or send us an email to sales@cryo-innovation.com!

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