The Embryo Corral® and the Embryo GPS™ IVF Dishware

Culture dishes to fit every need...
Culture dishes your patients deserve...

The Embryo GPS™: Begin your culture right with the first dish designed with your embryos in mind.

The Embryo Corral® is optimum for embryo growth. The innovative design of the Corral dishware provides for ‘group’ culturing while maintaining the ability to assess the development of the embryos individually.

The unique self-contained wells of both the Embryo Corral® and Embryo GPS™ provide for culture in a defined measure of medium which promotes rapid identification of each embryo. Rapid identification means that the embryos can be returned to their controlled environment sooner.

Culture media and the dishes
The design supports the use of ALL culture media in the IVF marketplace. The Embryo Corral® and Embryo GPS™ dish may be used for egg retrieval, fertilization, culturing of ICSI eggs, oocyte and embryo culture at all stages. The Embryo Corral® and Embryo GPS™ dishware can be used for all types of media such as single step sequential medium, multiple step sequential medium and optimized media such as global®. The well design can be used to have defined media volumes when applying an oil overlay.
The Embryo GPS™

The Embryo GPS™
Dishware provides a more constant environment for culturing. Self contained wells for culture ensures consistent volume of medium droplets, ease of oil overlay, effortless specimen identification and prevention of droplet detachment.

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IVF dishes have grown up…..
The Embryo Corral® and GPS™ dish have grown into a mature design to assist the embryologist in embryo culture, observation, and assessment. Since the inception of IVF in 1988, this is the only IVF designer dishware in 18 years. By defining the work space, the Embryo Corral® and GPS™ dish define the volume of medium that works well for embryo development, allow individual observation for scoring, and improve performance by ‘grouping’ the embryos.

The Embryo Corral® dish: The fluid dynamics of the Corral dish allows the embryos to ‘crosstalk’ by permitting culture medium and autocrine and paracrine growth factors to flow between the quadrants. This assists embryonic development while maintaining the embryos in separate quadrants for individual observation and monitoring. The eight outer wells are of an exact size, to allow ease in aliquoting media and oil overlays. These wells also protect the embryos from the collapse of conventional droplets and provide permanent placement. The working surfaces of the dish have slight concave contours to allow the embryos to settle in a defined GPS location for ease of location and observation. The time outside the incubator is reduced, so that the embryos can be more quickly returned to the controlled environment of the incubator.

The Embryo GPS™ dish: The Embryo GPS™ dish gives you enhanced features for embryo culture dishes, including the contoured design of the 3 center wells that allows defined medium volumes, ease of oil overlay, and rapid location and observation of the embryos. Like the Embryo Corral® dish, the Embryo GPS™ dish has the eight outer wells for culture, washing, and holding.

Both dishes: Have the View. The bottom of all the wells have precisely the same focal distance and contour to allow you to move about the working areas of the dish more quickly and accurately. The bottom has a minimal amount of space above the heated work surface, which helps to stabilize temperatures while still preventing scratching of the bottom. Each dish wears the lid of choice. We designed a breathable space into the lid for greater CO₂ flow and equilibration, and to allow more sidewall of the dish to be exposed which gives you more dish to hold in order to improve your grip of the dish when the lid is in place.

The dishes in combination: Using both dishes gives you more versatility than ever before and will allow you to save time and to create more time in your laboratory. You can use the dish from egg retrieval through holding, washing, in-vitro fertilization or culture of ICSI eggs, embryo culture from Day 1 to Day 5 embryo culture, to embryo transfer. The Embryo Corral® and GPS™ dishes have been designed to assist the embryo and its development. The new Embryo Corral® and GPS™ sterile dishes are FDA complaint, CE registered, and pass all MEA testing, endotoxin tests, cytotoxicity and sterility tests. They can be used in combination for the entire IVF cycle, through to transfer.

In comes Nunc: When we had decided on the features and design, we sought the help of Nalge Nunc International to work with us closely in production. The Nalge Nunc team of engineers and production personnel brought to the dish years of quality, proven sterility validations and a true value added product. Nalge Nunc allows us to produce dishes with extremely close tolerances and plastic clarity; contributing years of experience in the production of quality products, which are of the best materials, and have a proven track record in IVF. The Embryo Corral® and GPS™ dish are ‘designer dishware’ for IVF, and were developed with performance and savings in mind. Order your dishes today and begin to benefit from them immediately.

www.SunIVF.com
The Embryo Corral®

The Embryo Corral® possesses 4 quadrants within each of its 2 central wells. Our unique quadrant design allows the exchange of medium between the embryos. Fluid movement permits “crosstalk” between embryos while the individual quadrants allow singular monitoring and development tracking of each specimen.

Outer Wells
The outer wells may be used for additional culturing, washing, and maintaining samples. The declining floor, promotes ease in sample location by ensuring a common focal setting.

Center Wells
Allows the ‘grouping’ of embryos yet individual tracking of each specimen. Design encourages free flow of culture medium and embryo-derived, autocrine factors which assist in the development of embryos. Design allows ease in applying oil overlay and medium placement.

Vehicle for Autologous Co-cultures
The revolutionary design of the Embryo Corral® central well provides a surface to plate autologous co-cultures. Embryos located in the remaining 3 quadrants benefit from culture.

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The Benefits of Group Culturing and Designer Dishware
Charlene Alouf, PhD, Laboratory Director of Crozer Chester Medical Center

The group culturing of embryos has shown beneficial effects in the in vitro development of embryos, through the blastocyst stage. Several reports have shown that increased embryo density, or number of embryos cultured per medium droplet, are beneficial to preimplantation growth and development in vitro (1-8). These studies support the theory that mammalian preimplantation embryos produce autocrine or paracrine factors which may influence, respectively, their own development and the development of sibling embryos in group culture.

Group embryo culture offers a simple approach to the benefits of intercellular communication without the use of complex tissue preparations such as autologous endometrial or granulosa cell cultures. Until now, however, communal culture meant sacrificing the ability to assess the embryos individually on a daily basis; a routine procedure employed in many programs worldwide (18). Group culture appears most beneficial when embryos are cultured at a higher density in a lower volume of fluid; however, negative effects on growth and development can be observed when the embryo density is too high (9). These observations have lead to the theory of the conditioning effects of communal culture. Positive conditioning during culture is suspected when embryo-derived factors stimulate their own or neighboring embryo development, along with evidence for embryo ‘cross talk’ in vitro (19). The grouping of embryos showed improvements in implantation and fetal development were seen in mice following transfer of embryos derived from group culture in comparison with single culture embryos (4).

Reports involving pronuclear scoring, early cleavage, and other observations such as multinucleation, individual blastomere characteristics and fragmentation suggest that particular embryo morphologies may correlate with a higher implantation potential and pregnancy rate (10-16).

The introduction of the Embryo Corral® culture dish may provide a unique opportunity to incorporate these benefits of communal culture in the IVF laboratory without abandoning the daily practice of individual embryo assessment. Its unique design allows maximal communication between the embryos in reduced medium volume while precisely maintaining each embryo in individual quadrants. It is time to revisit group culture in IVF; to promote an environment more similar to in-vivo conditions employing a new generation of dedicated IVF dishware (18).

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7 winning features of ‘the dishes’

1. Provides for the ability to use for single or group culturing.
2. Group culture with the benefits of individual tracking.
3. Each well enables rapid identification of each embryo or specimen.
4. Contoured bottoms of each well provide for predetermined location of specimens.
5. Each self-contained wells maintain the droplets integrity.
6. Designed in a collaboration involving clinical embryologists and plastic engineers.
7. Redesigned lid allows increased CO₂ exchange.

The Embryo Corral® and the Embryo GPS™

The only culture dishes you will ever need…
The only choice for your patients...

References

7 O’Neill, C. 1998. Autocrine Mediators are required to act on the embryo by the 2-cell stage to promote normal development and survival of mouse preimplantation embryo in vitro. 58:1303-1309.

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