

# AGGREGATION NEEDLES **DN-09**

for chimera production

New design of aggregation needles to create small depression in the bottom of a tissue culture dish for aggregating small embryonic parts, such as:

1. two 8 - cell - stage embryos to produce chimeras.
2. clump of mouse embryonic stem (ES) cell and 8 - cell - stage mouse embryo to produce ES cell chimeras.
3. clump of ES cell and 4 - cell - stage tetraploid embryos to produce completely ES cell - derived embryos.
4. defined pieces of early post - implantation mouse embryos to study embryonic induction processes.



Used with the ball show on the other side, these needles provide an ergonomic solution for lowering the stress on fingers and hands during use.



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## **DN-10**

DN-10N

DN-10

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# ACCESSORIES **DN-10B** ball

for aggregation needles

## **DN-10C** cap



The plastic ball attached to the handle of the needle decreases the stress on the fingers and hands when the aggregation needle is in use. The ball can be used only with the new needle design (DN-10).

Cap protects the tip during storage.



Preparation of aggregation plates for mouse embryo chimera production. You will need the followings:

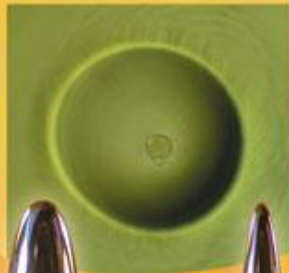
- 35 mm Falcon tissue culture plates KSOM.
- medium for preimplantation embryo in 1 ml syringe with 26G needle
- paraffin oil (Fish Scientific, Light Mineral oil, 0121-B)
- DN-09 aggregation needle

1. Using the medium filled syringe, put four rows of microdrops (roughly 3mm in diameter) into a 35 mm tissue culture dish, three drops in the first and fourth, five drops in the second and third rows.

2. Cover the whole plate with paraffin oil.

3. Sterilize the needle by wiping with ethanol.

4. Press the aggregation needle into the plastic through the paraffin oil and culture medium, while making a circular movement with the free end of the needle you are holding. Do not twist! This movement creates a tiny scoop of about 300  $\mu\text{m}$  in diameter with a clear smooth wall.



Depression created by the needle containing an 8-cell stage mouse embryo.



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