NSET™ Device Helpful Hints for Embryo Transfer in Mice

FOR TECHNICAL SUPPORT
Please Call +1 (859) 317-9213 or Email info@paratechs.com

IMPORTANT! Before NSET Device use please read carefully:

- NSET Instructions
- NSET FAQs
- NSET Helpful Hints

NSET Device technical support documents can be found on our webpage: www.paratechs.com/nset-resource-page/

The following are hints and suggestions from our customers, technicians, and scientists who have proved helpful.

1. **Read all of the NSET Technical Support Letter, Instructions, FAQs and Helpful Hints carefully before beginning your NSET trials.** The instruction insert can be found in each box of NSET. All support documents can be found at www.paratechs.com/nset-resource-page/.

2. **Prior to actual experiments, practice the NSET technique on 2.5 dpc pseudopregnant mice without embryos.**

3. **NSET is designed to fit snugly on a Rainin Classic PR2, 0.1-2µl or Gilson Pipetman P2, 0.2-2µl pipette for loading embryos and precise measurement of media into the tip of the device.**

4. **We highly recommend that you only use mice that are not sedated. This makes it easier to get the mouse in a natural position to find and enter the cervix.**

5. **The NSET device is only able to pass the cervix during certain phases of estrus and at 2.5 dpc in pseudopregnant mice. Therefore we strongly recommend the use of 2.5 dpc pseudopregnant mice (after the plug has fallen out) for training purposes and embryo transfers using the NSET device.**

6. **We use CD1 mice and highly recommend using this strain for your pseudopregnant recipient. We suggest using mice that weigh ≥26g and are at least 60 days old.**

7. **Embryos should be incubated to blastocyst stage (e3.5) since the device transfers them to one of the uterine horns and not the oviduct. Some end users have been successful using morula embryos.**

8. **Select a media you have used which gives you the best success in incubating your embryos. For example, use M2 or KSOM medium and transfer 12 to 20 embryos.**

9. **Gooseneck lighting is highly recommended to help locate the cervical opening.**

10. **We suggest using conscious, calm, and unagitated mice. The female mouse in the video on our website is not sedated.**

11. **We find it relatively easy to keep the female still and reduce squirming by placing the mouse on top of the cage with a wire rack so she can grab the cage bar surface. Use the holding technique as described in #6 of the NSET instructions and also demonstrated in the video. ([http://www.paratechs.com/nset](http://www.paratechs.com/nset))**

12. **Do not recommend the use of lubricants. You may use sterile water or culture media to moisten the speculum then shake off excess before insertion into the vagina.**

13. **Gently insert small speculum into the vagina. The mouse will innately push the speculum out a little. Gently press it back in place so the NSET device can pass through the cervix and into one of the uterine horns.**

14. **Optional: Remove small speculum and replace with large speculum. If desired, use an adequate light source and visualize the cervix.**

15. **Be patient and do not apply too much pressure when finding and penetrating the cervix with the NSET tip. This could cause tissue damage and will likely bend the NSET device tip making it nearly impossible to use. If the first attempt to insert the NSET is not in the correct location, gently reposition the device and repeat.**

16. **Embryo loss may occur if tip gets bent due to too much pressure asserted while finding the cervical opening. Again, gentle repeated attempts are pertinent to NSET success.**

17. **You will know the device is properly inserted through the cervix into the uterus when the hub of the NSET device touches the end of the speculum.**

18. **To expel your embryos press the pipette plunger all the way down. Count to 3. Do not release plunger.**

19. **Slowly remove NSET without releasing pipette plunger.** If plunger is released prior to removal, some embryos could be pulled back into the tip.

20. **Inspection of the NSET tip under a microscope after use is good practice. The clear tip NSET allows visualization inside the tip.**

**The device is designed for a one-time use only.** Repeated use will clog the NSET tip with cervical tissue. Reuse may render the catheter pliable and no longer rigid enough to pass the cervix. Thus potentially depositing embryos in the vagina and not the uterine horn as intended.

**For Technical Support:** Please contact us with any questions by phone +1-859-317-9213 or email info@paratechs.com.

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The NSET™ (Non-Surgical Embryo Transfer) Device for Mice #60010 is manufactured in the USA by an FDA Registered Medical Device Manufacturer and ISO 13485:2003 registered company. Patent Information: Non-Surgical Embryo Transfer Method and Apparatus, United States Patent 9,615,903.

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