

COOK MEDICAL

# The principles of a robust environment for embryo growth

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# Embryo culture incubation

- The incubator is a critical piece of equipment in the embryo culture laboratory.
- It should provide a consistent internal environment and, therefore, stabilize culture variables such as pH and T.
- It should return internal conditions quickly to equilibrium values.
- Embryo culture stability is key for IVF success.

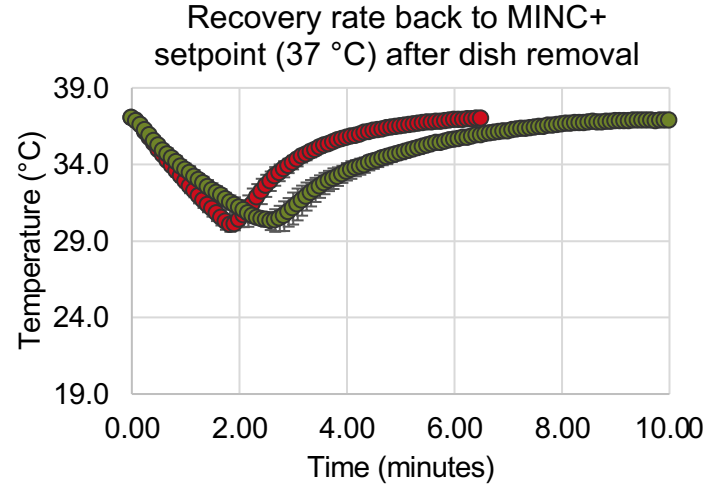
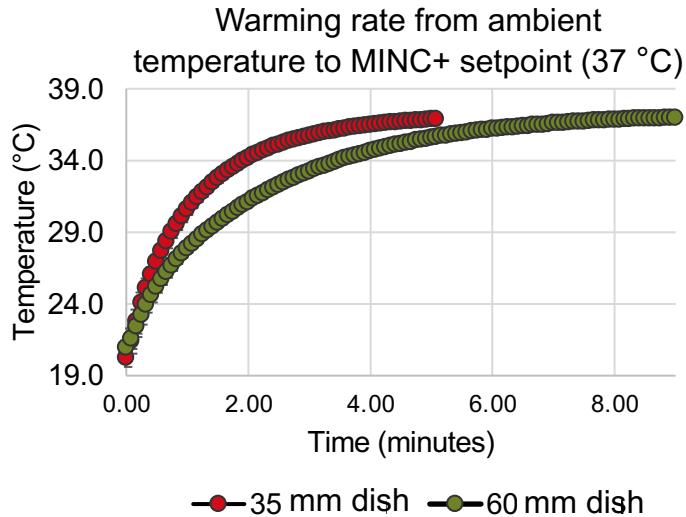


# Temperature dynamics of culture medium in the MINC+®

- When dishes for embryo culture are made and placed inside the incubator, how long does it take for the medium to reach equilibrium?
- How does removing a dish from the incubator into room temperature for routine observations affect the temperature of the culture medium?
- How fast does it recover once the dish is replaced into the incubator?



# Temperature dynamics of culture medium in IVF practice with the MINC+



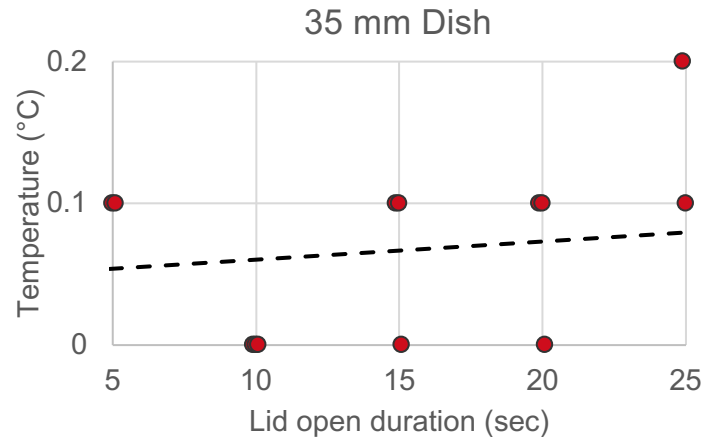
# Temperature dynamics of culture medium in IVF practice with the MINC+

- If a dish with an equilibrated culture medium droplet covered with oil is inside the chamber of the incubator while the lid is opened, how much does the temperature decrease?
- Let's look at the decrease relative to the duration for which the lid is held open.



# Temperature dynamics of culture medium in IVF practice with the MINC+

Temperature loss ( $^{\circ}\text{C}$ ) as a result of the lid being open for the specified periods of time



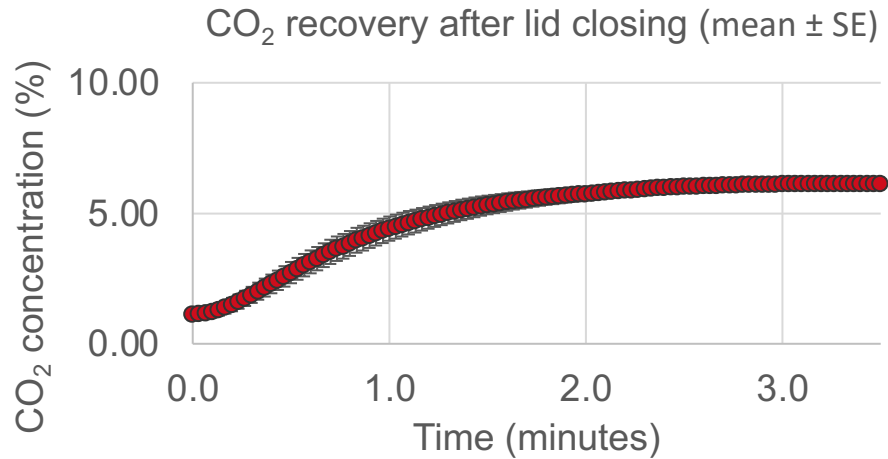
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# Gas dynamics of the MINC+ in IVF practice

When the lid is opened and closed, how long does it take for the internal CO<sub>2</sub> concentration to recover?



# Gas dynamics of the MINC+ in IVF practice





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