

CES technical data

Features	Details
Compatibility	<i>C. elegans</i> (incl <i>P. pacificus</i>)
Capability (input)	<p>Amount of worms that can be run through the system: The CES-5000 System can handle from just a small number ~10 up to ~10k - 20k Gravid Nematodes. The CES-5000 has been successfully tested with up to 40k gravid adult nematodes.</p> <p>The smaller CES-700 can handle from just a small number ~10 up to ~1k – 2k Gravid Nematodes.</p> <p>Liquid culture: typical 250mL S-medium culture with a fully grown F3 generation for the CES-5000. Typical 20mL - 30mL for the CES-700.</p> <p>Solid culture: CES-5000 up to ~50 x 90mm NGM plates, fully grown. CES-700 typical is one up to ~7 x 90mm NGM plates</p>
Capability (output)	<p>Amount of worms that can be harvested: The amount of L1's harvested will depend on the number of gravid adult worms and egg's to start with and the condition of the nematodes. The length (time) of the Harvest window will decide on the number of L1's to be harvested. Add Serotonin at the Harvest stage to boost the egg laying, the output will be in the range of 10-15 L1's per Gravid Adult and given sufficient Harvest time even more. If very large numbers are required several Harvest filters can be used in parallel.</p>
Cleaning & Sterilization	<p>Preferred method is to use 0.5M NaOH and a small (2 liter) 40khz ultrasonic cleaner. The ultra-sonic cleaner will ensure the filters are truly clean, while speeding up the process of cleaning. This will typically also take care of scaling. It is not recommended to descale the filters using an acid solution. Using a citric-acid will cause coloring/stains on the filter and repeated use may ultimately damage the filters.</p> <p>Filters can be sterilized using a 70% alcohol solution.</p>
Time to synchronize a single strain	<p>Synchronization of one strain typically takes between 10 and 15 minutes. This is the time spent to pre-wash / stabilize the input. Harvest time may be between a few minutes up to an 'overnight', however requires no user attention.</p> <p>The protocol uses one Stabilizing filter and one Harvesting filter. All filters can be used indefinitely (cleaned after your experiment). The Harvest Filter will be occupied for the duration of the harvest time. Therefore if multiple strains are to be synchronized concurrently, multiple Harvest Filters will be needed. In principle one (1) Stabilization filter will suffice, however in most cases needs to be cleaned between different strains if cross-contamination is to be avoided.</p>
Size & Weight	<p>The CES-5000 filters have a diameter of 80mm, comprising ~5000mm² of filter surface.</p> <p>A complete CES-5000 system comes in a shipping box, with 36cm x 28cm x 26cm dimensions and a gross weight of ~ 3kg</p> <p>The CES-700 filters have a diameter of 30mm, comprising ~700mm² of filter surface.</p> <p>A complete CES-700 system comes in a shipping box, with 25cm x 20cm x 16cm dimensions and a gross weight of ~ 1.5kg</p>

Please refer to NemaSync website for more detailed and background information :

- a) <https://www.nemasync.com/ces>
- b) <https://www.nemasync.com/ces#how-does-it-work>
- c) <https://www.nemasync.com/ces#does-the-system-works-with-small-amount-of-worms-as-well>
- d) <https://www.nemasync.com/ces#can-i-synchronize-multiple-strains>
- e) <https://www.nemasync.com/ces#how-are-the-filters-cleaned>
- f) <https://www.nemasync.com/ces#why-are-the-ces-filters-special>

A video of the protocol can be found at <https://www.nemasync.com/ces#ces-video>