

Work steps



One Chamber with
12 Type 2L

Explanation of the calculation

Loading with IVCs

48 IVCs
x 3 seconds

The first 12 cages are packed into the chamber (12 x 3 seconds).

Starting the cycle

1 minute

The first cycle is then started via the appliance menu (1 minute).

Number of Cycles x cycle duration

4 x 16 minutes

The cycle duration is 16 minutes. It is assumed, that the unloading and loading of the next cages only takes 12 x 3 seconds (see time calculated in work step 1).

Removal of the mice, determination of death and documentation

(240 x 10 sec.)
minus
3 x 10 minutes
(*benefit of
parallel working*)

The second cycle is then started. While the second cycle is running (16 minutes) the 60 mice from cycle No. 1 (12 cages x 5 animals) are removed from the cages, assessed and documented: 60 mice x 10 seconds = 600 seconds = 10 minutes. However, during the cycle there will remain a waiting time of 6 minutes until the next cycle can be started.

Total duration

66,4 minutes

The process and calculation during cycles No. 3 and 4 is identical to No. 2. Moreover, it is assumed, that the unloading and loading of the next cages only takes 12 x 3 seconds (see time calculated in work step 1).

Working method

Serial/parallel

Appraisal of the system comparison:

Comparing the chambers used with Type 2L and Type 2 cages, the Type 2 cages have a larger benefit in time, since more cages per cycle can be packed into the chamber. This enables a larger potential for parallel work and hence a larger saving in time. When comparing a one-chamber system with a four-chamber system, the benefits of parallel work outweigh the advantage of a simultaneous euthanasia of a large number of mice. It should be noted, that the assumptions for the calculation are in favour of the chamber systems, e.g. concerning the unloading and loading of the cages during the cycles. In reality, it is likely that these values are rather higher and thus even increase the time benefit of parallel work.