

Users manual

Counting and determining stages of copepods



VERSION

1.2

DATE

6.10.2017

SUPPORT

post@cfeed.no

PAGES AND ATTACHMENTS

2

Taking samples of copepod nauplii

Use aeration to create good mixing and collect a sample from 2-3 spots in the copepod tank.

Counting copepod density

- Fixate the sample (lugol, concentrated vinegar or similar).
- Use similar procedure as when counting rotifers/Artemia.
- Alternatively:
 - Make 7 droplets, each of 200 μL that you can count. Move the sample between 2 cups, back and forth, to mix the sample between each droplet.
 - Count the amount of nauplii in each droplet, and exclude the highest and lowest count, to estimate the density in 1 mL.

Determining copepod stage

The copepod stage can be determined through examination of the morphology or by measuring the length of the copepod. The length approximately reflects the stage according to table 1.

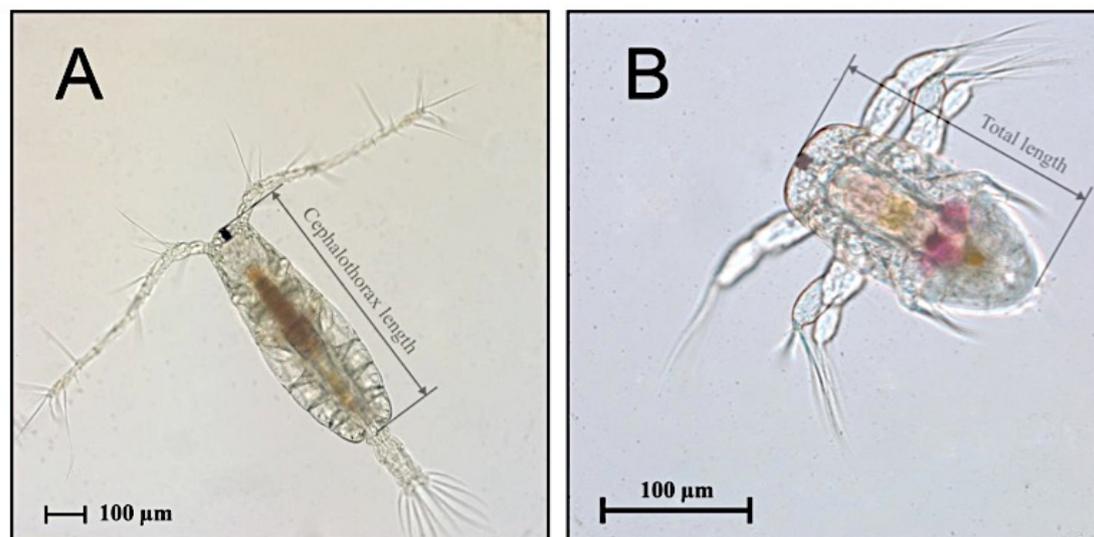


Figure 4. The photos show where the length measures are taken of a copepodid (A) and a nauplius (B) (Pictures from Skogstad, 2010).

Copepod stages, lengths and weights

Copepod stage	N1	N2	N3	N4	N5	N6	C1	C2	C3	C4	C5	A
Copepod length (µm)	110	135	160	185	210	240	410	490	580	690	900	1100-1400
Copepod dry weight (µg)	0,04	0,08	0,14	0,23	0,36	0,54	0,56	0,99	1,4	2,4	4,9	6,3

Table 1. Copepod developmental stages in relation to size and dry weight.

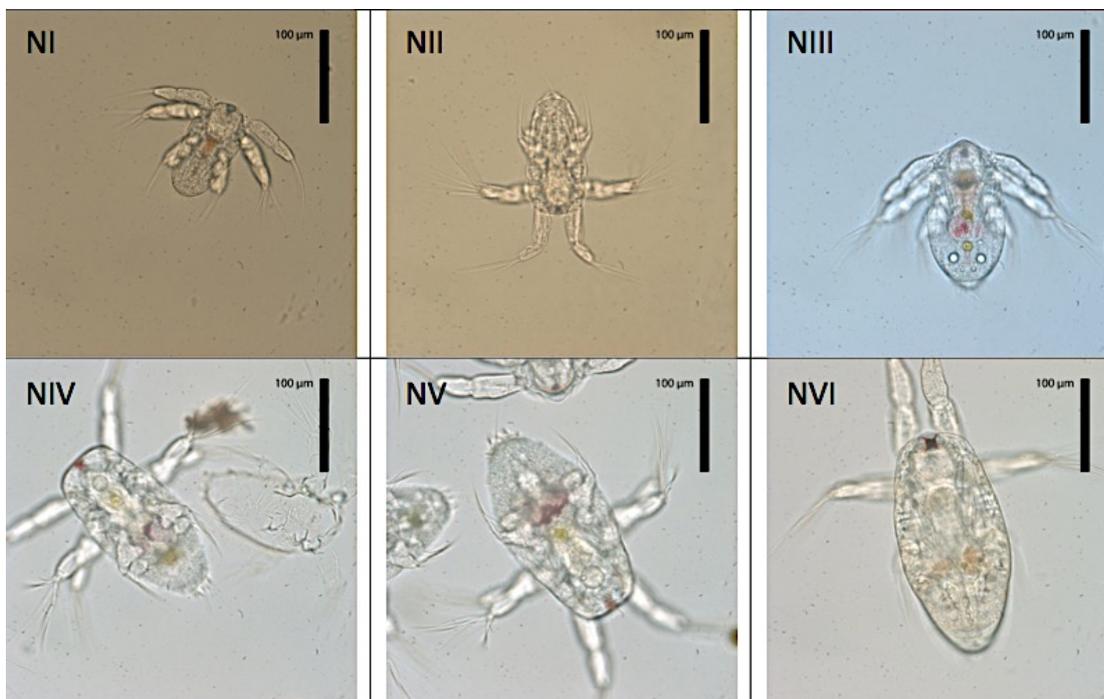


Figure 3. All six developmental stages of copepod nauplii (Pictures from Nasset, 2010).