

Protocol of growing duckweeds

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For liquid medium in flasks (optimal growth for experiment)

1. Mix 1.6g SH powder medium+10g sucrose for 1L liquid medium
2. Adjust medium pH to 5.8 by KOH
3. Aliquot 60ml medium into 250ml flasks, cover by cotton stopper tightly
4. Autoclave for 25min
5. Cool down to RT, transfer the stock plant into the medium by sterile way using loop
6. Move in chamber for tissue culture 16h regular light+8h dark 23 degree to grow for 2 weeks

For agar medium in plates (slowest growth for keeping the collection)

1. Mix 1.6g SH powder medium+5g sucrose for 1L medium
2. Adjust medium pH to 5.8 by KOH
3. Add 8g agar in 1L(4g for each 500ml)
4. Autoclave for 25min
5. Cool down to 65 degree, pour into sterile plates by strictly sterile way(1L medium can make 30 plates)
6. 1hour later, when plates become solid, transfer the stock plant into the medium by strictly sterile way
7. Move in chamber for tissue culture 8h low light+16h dark 18 degree to grow for 3 months

Chemical

S6765 Sigma Schenk and Hildebrandt basal salt mixture

Agar

Sugar

KOH

Note:

Duckweeds are not fussy. They could grow at a big range of temperature from 15°C ~30°C, wide range of pH value. However, the fastest growth condition is around 25°C, pH=5.8, long day, plus sucrose.