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CoBG-11 preparation

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CoBG-11 is a coculture medium used to coculture cyanobacteria and *E. coli* by Zhang et al (2020). It is optimized for *E. coli* growth. Here are its components:

1. 150 mM NaCl,
2. 4 mM NH₄Cl
3. 3 g/L 2-[[1,3-dihydroxy-2-(hydroxymethyl) propan-2-yl] amino] ethanesulfonic acid (TES)

The pH value is adjusted with NaOH to 8.3.

The protocol below describes the preparation of 100ml of coBG-11.

DOI

dx.doi.org/10.17504/protocols.io.by6hpzb6<https://link.springer.com/article/10.1186/s13068-020-01720-0#Sec9>Arshshaikh 2021. CoBG-11 preparation. **protocols.io**<https://dx.doi.org/10.17504/protocols.io.by6hpzb6>Cyanobacteria, *E. coli*, coculture, growth media

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- 1 Measure **0.88 g NaCl** , **0.0214 g NH₄Cl** , and **0.3 g TES buffer** and add it to a 150mL flask.

These calculations have been made for 100 mL coBG-11. For further information check the reference.

Zhang L, Chen L, Diao J, Song X, Shi M, Zhang W (2020). Construction and analysis of an artificial consortium based on the fast-growing cyanobacterium *Synechococcus elongatus* UTEX 2973 to produce the platform chemical 3-hydroxypropionic acid from CO₂..

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<https://doi.org/10.1186/s13068-020-01720-0>

- 2 Add **50 mL BG-11** to the flask and mix till contents dissolve. If salt persists, add 10mL more of BG-11 and mix well.
- 3 Once contents dissolve, add BG-11 up to 95 mL.
- 4 Adjust pH of the solution to 8.3 with NaOH.
- 5 Fill BG-11 up to 100 mL measure pH and adjust if required.

Autoclave CoBG-11 before using.