



Sep 14, 2019

## Creation of low-oxygen conditions.

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1 Works for me [dx.doi.org/10.17504/protocols.io.69mhh46](https://doi.org/10.17504/protocols.io.69mhh46)

2019 iGEM NEFU\_China

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### ABSTRACT

We use Na<sub>2</sub>SO<sub>3</sub> to create low-oxygen conditions in our experiment.

### MATERIALS TEXT

LB medium

Na<sub>2</sub>SO<sub>3</sub>

IPTG

SMART SENSOR AR8010+ Dissolved Oxygen Meter

1

- 1 Prepare LB medium with different concentrations of Na<sub>2</sub>SO<sub>3</sub>.

1.1

Na <sub>2</sub> SO <sub>3</sub> (100g/L)	LB medium
0μL	20mL
20μL	20mL
40μL	20mL
100μL	20mL
200μL	20mL
400μL	20mL


- 2 Use Dissolved Oxygen Meter to measure dissolved oxygen of LB medium with different concentrations of Na<sub>2</sub>SO<sub>3</sub> in 0h~1h~2h~5h.

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- 3 Add 50ml LB medium and 200ul bacteria solution to conical flask, shake overnight at 37°C.

- 4 Take 5 ml in 5 50ml centrifuge tubes separately, centrifuge the bacteria at 3000xg at room temperature for 5 min. Discard the supernatant.
- 5 Prepare LB medium with different concentrations of Na<sub>2</sub>SO<sub>3</sub>.  
Add Na<sub>2</sub>SO<sub>3</sub> to LB medium.

Na <sub>2</sub> SO <sub>3</sub> (100g/L)	LB medium
0ul	20ml
100ul	20ml
200ul	20ml
400ul	20ml
800ul	20ml

- 6 Add LB medium with different concentrations of Na<sub>2</sub>SO<sub>3</sub> to 5 50ml centrifuge tubes separately.
- 7 Add 2ul IPTG to 5 50ml centrifuge tubes separately, and resuspend. Shake 5h at 37°C.
- 8 Use  to measure ABS with different concentrations of Na<sub>2</sub>SO<sub>3</sub> in 0 h, 1 h, 2 h, 5 h.



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