

Lab 1: Eau That Smell

Biological Materials:

Strain 1-1	NB376	stationary phase, indole-
Strain 1-2	NB377	stationary phase + inverter, indole-
Strain 1-3	NB378	log phase, indole-
Strain 1-4	NB379	no ATF1, indole-

Reagents:

ampicillin	e.g. Sigma, A0166	100 mg, use at final concentration of 100 mg/liter
isoamyl alcohol	e.g. Sigma, W205710	700 ul, dilute in LB
banana extract	e.g. Amazon, "Frontier" brand	1.5 ml, dilute in H ₂ O as instructed for smell standards

Next steps (per student team):

Day 1: grow overnights of each strain in LB+A (4x2.5 ml)

Day 2: inoculate each into 50 or 75 ml LB+amp+isoamyl (<300 ml LB+Amp, 250 ul isoamyl)

Day 2, 3, (4): follow growth and smell intensity

Final data: data analysis

Teacher provides:

Consumables

Luria Broth (LB), 1 liter
Sterile toothpicks, inoculating loops or sterile tips
Sterile tubes (16x150mm)+ loose caps (4)
50 ml conical tubes for smell stds (6 stds)
Pipet tips
Latex or nitrile gloves

Equipment

125 ml flasks (sterile) + stir bar (4)
Roller drum or shaker at 37° for growing liquid overnights
Room temperature shaker or stir plates for growing cells
Spectrophotometer or turbidity stds*
Sharpie pens
Pipetmen (P1000, P200, P20)

*Turbidity stds require

1.75 ml BaCl₂

80 ml 1% H₂SO₄