

PHOTOSYNTHESIS and RESPIRATION

LAB-DEMO

BTB = Brom Thymol Blue (yellow in acid, blue in base)

PHOTOSYNTHESIS: Plants in the light *use up* CO₂ (gas)

Jar #1: BTB + CO₂ $\xrightarrow[\text{in Light}]{\text{Plant}}$ BTB + less CO₂
(more/same/less)
color: yellow color: blue

Jar #2: BTB + CO₂ $\xrightarrow[\text{in Light}]{\text{NO Plant}}$ BTB + same CO₂
(more/same/less)
color: yellow color: yellow

Jar #3: BTB + CO₂ $\xrightarrow[\text{in Dark}]{\text{Plant}}$ BTB + more CO₂
(more/same/less)
color: yellow color: yellow

RESPIRATION: Animals AND Plants (in the dark) *Produce:* CO₂ (gas)

Jar #4: BTB + *NO* CO₂ $\xrightarrow[\text{in Dark}]{\text{Plant}}$ BTB + more CO₂
(more/same/less)
color: blue color: yellow

Jar #5: BTB + *NO* CO₂ $\xrightarrow[\text{NO Animal}]{\text{NO Plant}}$ BTB + same CO₂
(more/same/less)
color: blue color: blue

Jar #6: BTB + *NO* CO₂ $\xrightarrow[\text{in Dark}]{\text{Animal}}$ BTB + more CO₂
(more/same/less)
color: blue color: yellow