

135. ACETOBACTERIUM MEDIUM

NH ₄ Cl	1.00	g
KH ₂ PO ₄	0.33	g
K ₂ HPO ₄	0.45	g
MgSO ₄ x 7 H ₂ O	0.10	g
Trace element solution (see medium 141)	20.00	ml
Yeast extract	2.00	g
Na-resazurin solution (0.1% w/v)	0.50	ml
NaHCO ₃	10.00	g
D-Fructose	10.00	g
Vitamin solution (see medium 141)	10.00	ml
L-Cysteine-HCl x H ₂ O	0.50	g
Na ₂ S x 9 H ₂ O	0.50	g
Distilled water	1000.00	ml

Dissolve ingredients except bicarbonate, fructose, vitamins, cysteine and sulfide, bring to the boil and cool to room temperature under 80% N₂ and 20% CO₂ gas mixture. Add bicarbonate (solid) and equilibrate the medium with the gas until a pH of around 7.4 is reached. Then distribute under the same gas atmosphere in anoxic Hungate-type tubes or serum vials and autoclave. Before use adjust the pH to 8.0 - 8.2 by adding a sterile anoxic stock solution of sodium carbonate (5% w/v) prepared under 80% N₂ and 20% CO₂ gas mixture (c. 0.25 ml per 10 ml medium) and add fructose, vitamins (sterilized by filtration), cysteine and sulfide from anoxic sterile stock solutions prepared under 100% N₂.

Note: For autotrophic growth fructose is omitted and a gas atmosphere of 80% H₂ and 20% CO₂ is used.

For [DSM 1974](#) and [DSM 7417](#) use only 1.00 g/l of NaHCO₃ and omit Na₂CO₃ to reach a final pH of **6.5**.

For [DSM 4132](#) use fructose as substrate at a final concentration of 1.00 g/l.