

88. SULFOLOBUS MEDIUM

(NH ₄) ₂ SO ₄	1.30	g
KH ₂ PO ₄	0.28	g
MgSO ₄ x 7 H ₂ O	0.25	g
CaCl ₂ x 2 H ₂ O	0.07	g
FeCl ₃ x 6 H ₂ O	0.02	g
Allen's trace element solution (see below)	10.00	ml
Yeast extract (OXOID)	1.00	g
Distilled water	1000.00	ml

Dissolve ingredients (except yeast extract or other substrates), adjust pH of the salt solution at room temperature to 2.0 using 10 N H₂SO₄ and autoclave. Yeast extract and other organic substrates are sterilized separately by autoclaving of a 10% (w/v) stock solution at neutral pH.

Allen's trace element solution:

MnCl ₂ x 4 H ₂ O	180.00	mg
Na ₂ B ₄ O ₇ x 10 H ₂ O	450.00	mg
ZnSO ₄ x 7 H ₂ O	22.00	mg
CuCl ₂ x 2 H ₂ O	5.00	mg
Na ₂ MoO ₄ x 2 H ₂ O	3.00	mg
VO ₂ SO ₄ x 2 H ₂ O	3.00	mg
CoSO ₄	1.00	mg
Distilled water	1000.00	ml

Adjust pH of final solution to 2 with 1 N HCl.

For [DSM 5348](#) omit yeast extract and supplement medium with 0.50 g/l powdered sulfur and 20.00 g/l sulfide ore (e.g., pyrite). Sterilize sulfur separately by steaming for 3 hours on each of 3 successive days and ore by heating at 150°C over night. Add sulfur and ore aseptically to the autoclaved medium.

For [DSM 5389](#), [DSM 7519](#), and [DSM 12421](#) adjust pH of medium to 3.0 – 3.5.

For [DSM 6482](#) and [DSM 10039](#) reduce amount of yeast extract to 0.20 g/l and supplement medium with 5.00 g/l powdered sulfur. Sterilize sulfur separately by steaming for 3 hours on each of 3 successive days and add aseptically to the autoclaved medium.

Continued on next page

For DSM 9789 and DSM 9790 use 2.00 g/l yeast extract and adjust pH of medium to 1.0 by using 300.00 ml 0.5 M H₂SO₄ and 700.00 ml distilled water for the dissolving of salts.

For DSM 16993 supplement medium with 1.00 g/l D-glucose and 1.00 g/l Casamino acids. Adjust pH of the completed medium to 3.0.

For DSM 18786 use only 0.10 g/l yeast extract and supplement medium with 10.00 g/l sulfide ore (e.g., chalcopyrite). Sterilize ore by heating at 150°C over night. Adjust pH of the medium to 0.8.

For DSM 29038 supplement medium with 3.00 g/l K₂S₄O₆ added to the autoclaved medium from a stock solution sterilized by filtration. Adjust pH of completed medium to 2.5.

For DSM 29099 use only 0.20 g/l yeast extract and supplement medium with 1.00 g/l D-glucose and 10.00 g/l powdered sulfur. Sterilize sulfur separately by steaming for 3 hours on each of 3 successive days and add aseptically to the autoclaved medium. Adjust pH of final medium to 2.5 – 3.0.