88. SULFOLOBUS MEDIUM

\[
\begin{align*}
(NH_4)_2SO_4 &\quad 1.30 \text{ g} \\
KH_2PO_4 &\quad 0.28 \text{ g} \\
MgSO_4 \times 7 \text{ H}_2\text{O} &\quad 0.25 \text{ g} \\
CaCl_2 \times 2 \text{ H}_2\text{O} &\quad 0.07 \text{ g} \\
FeCl_3 \times 6 \text{ H}_2\text{O} &\quad 0.02 \text{ g} \\
\text{Allen’s trace element solution (see below)} &\quad 10.00 \text{ ml} \\
\text{Yeast extract (OXOID)} &\quad 1.00 \text{ g} \\
\text{Distilled water} &\quad 1000.00 \text{ ml}
\end{align*}
\]

Dissolve ingredients (except yeast extract or other substrates), adjust pH of the salt solution at room temperature to 2.0 using 10 N H\textsubscript{2}SO\textsubscript{4} and autoclave. Yeast extract and other organic substrates are sterilized separately by autoclaving of a 10% (w/v) stock solution at neutral pH.

\[\text{Allen’s trace element solution:}\]

\[
\begin{align*}
\text{MnCl}_2 \times 4 \text{ H}_2\text{O} &\quad 180.00 \text{ mg} \\
\text{Na}_2\text{B}_4\text{O}_7 \times 10 \text{ H}_2\text{O} &\quad 450.00 \text{ mg} \\
\text{ZnSO}_4 \times 7 \text{ H}_2\text{O} &\quad 22.00 \text{ mg} \\
\text{CuCl}_2 \times 2 \text{ H}_2\text{O} &\quad 5.00 \text{ mg} \\
\text{Na}_2\text{MoO}_4 \times 2 \text{ H}_2\text{O} &\quad 3.00 \text{ mg} \\
\text{VOSO}_4 \times 2 \text{ H}_2\text{O} &\quad 3.00 \text{ mg} \\
\text{CoSO}_4 \times 7 \text{ H}_2\text{O} &\quad 1.00 \text{ mg} \\
\text{Distilled water} &\quad 1000.00 \text{ ml}
\end{align*}
\]

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.

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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.