

Desmid-SVCK Medium

Reference: Microalgae and Zygnematophyceae Collection Hamburg (MZCH), formerly Sammlung von Conjugaten-Kulturen SVCK, Univ. Hamburg

For 1000 mL final culture medium add the following quantities (Volume) of stock solutions (SL) prepared at the given concentrations to 850 mL dd-H₂O. Add **one component after the other until each one has completely mixed** and finally fill up to 1000 mL.

All stock solutions should be stored unsterilised at 4 °C. Store vitamin mix (SL 5) at -20 °C.

Stock Solution (SL)	Volume	Component	Concentration in SL	Conc. in final Medium
SL 1	0.5 mL	Ca(NO ₃) ₂ · 4H ₂ O	10.0 g · 100 mL ⁻¹	3.07 · 10 ⁻⁵ M
SL 2	0.5 mL	MgSO ₄ · 7H ₂ O	10.0 g · 100 mL ⁻¹	2.00 · 10 ⁻⁴ M
SL 3	0.5 mL	K ₂ HPO ₄	0.6 g · 100 mL ⁻¹	1.75 · 10 ⁻⁵ M
SL 4	0.25 mL	Titriplex III (Na ₂ EDTA)	0.50 g · 100 mL ⁻¹	3.35 · 10 ⁻⁶ M
Trace elements solution		H ₃ BO ₃	0.10 g · 100 mL ⁻¹	4.04 · 10 ⁻⁶ M
		MnCl ₂ · 4H ₂ O	0.05 g · 100 mL ⁻¹	6.32 · 10 ⁻⁷ M
		FeSO ₄ · 7H ₂ O	0.05 g · 100 mL ⁻¹	4.50 · 10 ⁻⁷ M

Adjust pH to 7.0 with 1N KOH (approx. 1.5 mL). Trace elements solution should **not** be stored in glass containers, but instead in teflon or polycarbonate containers to prevent adsorption of metals to container surface.

Adjust medium to final pH of 6.0 with HCl and autoclave at 121 °C for 20 min.

For optimal maintenance of algal stock cultures this Medium is modified by the addition of a vitamin mix (SL 5).

The addition a vitamin mix is advised as some algal species need one or two of the vitamins contained in the mix.

SL 5 Vitamin mix	1 mL	Thiamine HCl – Vit B ₁	100 mg · 1 L ⁻¹	2.97 · 10 ⁻⁹ M
		Biotin – Vitamin H	1 mg · 1 L ⁻¹	4.08 · 10 ⁻¹⁰ M
		Cyanocobalamin – VitB ₁₂	0.2 mg · 1 L ⁻¹	1.48 · 10 ⁻¹¹ M
		Nicotinamide	0.1 mg · 1 L ⁻¹	1.88 · 10 ⁻⁷ M

For storage of vitamin mix acidify to a pH of 4.5-5.0 and autoclave or dispense aseptically through 0.2 µm sterile filters in plastic containers (reaction vials, cryovials, polycarbonate tubes) in 1 mL aliquots and **add aseptically to prepared medium after autoclaving and cooling**. Store at -20 °C.

For stock cultures on agar slants or agar plates add 10 g · 1 L⁻¹ = 1.0 % Agar (e.g. purified high strength, 1000 g · cm⁻²) to prepared medium before autoclaving.