Plymouth Erdschreiber Medium (PE)

(Tompkins *et al.* 1995)

This enriched seawater medium can be traced back to Schreiber's Medium and Erd-Schreiber's Medium (Schreiber 1927, Hämmerling 1931, Føyn 1934). The soil water extract substitutes for micronutrients, a chelator and trace metals. It is a good medium for maintenance culture of many marine algae, but the undefined nature of the soil extract makes it a problematic medium for experimental research. The CCAP recipe presented here was used extensively by Mary Parke at the Plymouth Marine Laboratory, England.

First, prepare the soil water extract by combining good quality air-dried soil with twice its volume of dH_2O; autoclave for 2 hours and cool. Filter the liquid with a Whatman No. 1 filter and store at 4°C. Prepare the nitrate and phosphate stock solutions, autoclave and cool. Combine 902.5 mL of filtered natural seawater and 47.5 mL of dH_2O to produce a 95% seawater solution, autoclave and cool. To prepare the final medium, aseptically add 1 mL each of the nitrate and phosphate solutions and 50 mL of the soil water extract to the 950 mL of 95% seawater. All solutions should be cool before combining to reduce precipitation.

Component	Stock Solution	Quantity	Molar Concentration in Final Medium
$NaNO_3$	200 g L^{-1} dH_2O	1 mL	2.35 x 10^{-3} M
$Na_2HPO_4 \bullet 12H_2O$	20 g L^{-1} dH_2O	1 mL	5.58 x 10^{-5} M
soil water extract	---	50 mL	---

References

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