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ASW+NO3 medium

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Roscoff Culture Collection¹

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Roscoff Culture Collection



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Protocol status: Working

We use this protocol and it's working

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Abstract

Medium used for cyanobacteria based on artificial seawater (ASW)

Troubleshooting

Before start

Please refer to our general recommendations to grow cultures :

<https://www.protocols.io/private/A48906DC1374AD6281495CB86A8F092F>

- 1
 - Dissolve 25 g of NaCl in MilliQ water
 - To this solution, add :

<i>Quantity</i>	<i>Compound</i>	<i>Stock Solution</i>	<i>Concentration in medium (in mM)</i>	
<i>mLstock /LASW</i>	<i>g/LASW</i>			
10	0,75	Sodium nitrate (NaNO ₃)	75 g/L	8.8
10	2	Magnesium chloride hexahydrate (MgCl ₂ ·6H ₂ O)	200 g/L	9.8
5	0,5	Potassium chloride (KCl)	100 g/L	6,7
5	0,5	Calcium chloride (CaCl ₂)	100 g/L	4.5
10	3,5	Magnesium sulfate heptahydrate (MgSO ₄ ·7H ₂ O)	350 g/L	14.2
5,5	1,1	TRIS-Base	200 g/L	9.08
2,5	0,03	Dipotassium phosphate (K ₂ HPO ₄)	12 g/L	0.172

- Adjust the pH to 8 with concentrated HCl
- Adjust to 999 mL with milliQ water
- Add 1 mL of trace metals (see recipe below)
- Autoclave the medium

Trace metal stock solution

- 2
 - Dissolve all these components separately in milliQ water :



<i>Quantity</i>	<i>Compound</i>
2.86g	Boric acid (H ₃ BO ₃)
1.81g	Manganese (II) chloride tetrahydrate (MnCl ₂ ·4H ₂ O)
0.222g	Zinc sulfate monohydrate (ZnSO ₄ ·H ₂ O)
0.390g	Sodium molybdate dihydrate (Na ₂ MoO ₄ ·2H ₂ O)
0.008g	Copper sulfate pentahydrate (CuSO ₄ ·5H ₂ O)
0.0494g	Cobalt nitrate hexahydrate (Co(NO ₃) ₂ ·6H ₂ O)
3.0g	Ferric chloride hexahydrate (FeCl ₃ ·6H ₂ O)
0.5g	EDTA magnesium disodium (EDTA(Na ₂ Mg))

- Combine the various solutions after full dissolution
- Make final volume up to 1L with milliQ
- Store in refrigerator