Jun 12, 2019

ASW+NO3 medium

DOI
dx.doi.org/10.17504/protocols.io.s5zeg76

Roscoff Culture Collection[1]

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Roscoff Culture Collection

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Protocol Citation: Roscoff Culture Collection 2019. ASW+NO3 medium. **protocols.io** **https://dx.doi.org/10.17504/protocols.io.s5zeg76**

Protocol status: Working
We use this protocol and it's working

Created: August 30, 2018

Last Modified: June 12, 2019

Protocol Integer ID: 15257

Abstract

Medium used for cyanobacteria based on artificial seawater (ASW)

Before start

Please refer to our general recommendations to grow cultures :

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

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

	Quantity	*Compound*	*Stock Solution*	*Concentration in medium (in mM)*	
	mLstock /LASW	*g/LASW*			
	10	0,75	Sodium nitrate (NaNO3)	75 g/L	8.8
	10	2	Magnesium chloride hexahydrate (MgCl26H2O)	200 g/L	9.8
	5	0,5	Potassium chloride (KCl)	100 g/L	6,7
	5	0,5	Calcium chloride (CaCl2)	100 g/L	4.5
	10	3,5	Magnesium sulfate heptahydrate (MgSO47H2O)	350 g/L	14.2
	5,5	1,1	TRIS-Base	200 g/L	9.08
	2,5	0,03	Dipotassium phosphate (K2HPO4)	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 receipe below)
- Autoclave the medium

Trace metal stock solution

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- Dissolve all these components separately in milliQ water :

	Quantity	*Compound*
	2.86g	Boric acid (H3BO3)
	1.81g	Manganese (II) chloride tetrahydrate (MnCl2-4H2O)

	0.222g	Zinc sulfate monohydrate (ZnSO4-H2O)
	0.390g	Sodium molybdate dihydrate (Na2MoO4-2H2O)
	0.008g	Copper sulfate pentahydrate (CuSO4-5H2O)
	0.0494g	Cobalt nitrate hexahydrate (Co(NO3)2-6H2O)
	3.0g	Ferric chloride hexahydrate (FeCl-6H2O)
	0.5g	EDTA magnesium disodium (EDTA(Na2Mg))

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