

Isolation, Propagation, and Identification of Bacterial Species with Hydrocarbon Metabolizing Properties from Aquatic Habitats

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jove.com/video/63101

Materials

Name	Company	Catalog Number	Comments
Agarose	Sigma-Aldrich	A4718	Gel electrophoresis
Ammonium chloride (NH ₄ Cl)	Sigma-Aldrich	A9434	Growth medium component
Ammonium sulphate	Sigma-Aldrich	A4418	Growth medium component
Bacto-Agar	Millipore	1016141000	Solid media preparation
Calcium chloride (CaCl ₂)	MERCK	C4901-500G	Growth medium component
Catechol	Sigma-Aldrich	135011	Hydrocarbon degradation assay
Cetyltrimethylammonium bromide, CTAB	Sigma-Aldrich	H6269	Genomic DNA Isolation
Chloroform	HIMEDIA	MB109	Genomic DNA isolation
Disodium phosphate (Na ₂ HPO ₄)	Sigma-Aldrich	S5136	Growth medium component
EDTA	Sigma-Aldrich	E9884	gDNA buffer component
Ferrous sulphate, heptahydrate (FeSO ₄ ·7H ₂ O)	Sigma-Aldrich	215422	Growth medium component
Glucose	Sigma-Aldrich	G7021	Growth medium component
Glycerol	Sigma-Aldrich	G5516	Growth medium component; Glycerol stocks
Isopropanol	HIMEDIA	MB063	Genomic DNA isolation
LB Agar	Difco	244520	Growth medium
Luria-Bertani (LB)	Difco	244620	Growth medium
Magnesium sulphate (MgSO ₄)	MERCK	M2643	Growth medium component
Manganese (II) sulfate monohydrate (MnSO ₄ ·H ₂ O)	Sigma-Aldrich	221287	Growth medium component
Nutrient Broth (NB)	Merck (Millipore)	03856-500G	Growth medium
Peptone	Merck	91249-500G	Growth medium component
Phenol	Sigma-Aldrich	P1037	Genomic DNA isolation

Potassium phosphate, dibasic (K ₂ HPO ₄)	Sigma-Aldrich	P3786	Growth medium component
Potassium phosphate, monobasic (KH ₂ PO ₄)	Sigma-Aldrich	P9791	Growth medium component
Proteinase K	ThermoFisher Scientific	AM2546	Genomic DNA isolation
QIAquick Gel Extraction kit	QIAGEN	160016235	DNA purification
QIAquick PCR Purification kit	QIAGEN	163038783	DNA purification
R2A Agar	Millipore	1004160500	Growth medium
SmartSpec Plus Spectrophotometer	BIO-RAD	4006221	Absorbance measurement
Sodium acetate	Sigma-Aldrich	S2889	Genomic DNA isolation
Sodium chloride (NaCl)	Sigma-Aldrich	S9888	Growth medium component
Sodium dodecyl sulphate (SDS)	Sigma-Aldrich	L3771	Genomic DNA isolation
Styrene	Sigma-Aldrich	S4972	Styrene biodegradation
Taq DNA Polymerase	NEB	M0273X	16s rRNA PCR
Tris-EDTA (TE)	Sigma-Aldrich	93283	Resuspension of genomic DNA
Tryptic Soy Broth (TSB)	Merck	22092-500G	Growth medium
Yeast extract	Sigma-Aldrich	Y1625-1KG	Growth medium component
Zinc sulfate heptahydrate (ZnSO ₄ ·7H ₂ O)	Sigma-Aldrich	221376	Growth medium component