

Materials List for:

Workflow Based on the Combination of Isotopic Tracer Experiments to Investigate Microbial Metabolism of Multiple Nutrient Sources

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Materials

Name	Company	Catalog Number	Comments
D-Glucose	PanReac	141341.0416	
D-Fructose	PanReac	142728.0416	
DL-Malic acid	Sigma Aldrich	M0875	
Citric acid monohydrate	Sigma Aldrich	C7129	
Potassium phosphate monobasic	Sigma Aldrich	P5379	
Potassium sulfate	Sigma Aldrich	P0772	
Magnesium sulfate heptahydrate	Sigma Aldrich	230391	
Calcium chloride dihydrate	Sigma Aldrich	C7902	
Sodium chloride	Sigma Aldrich	S9625	
Ammonium chloride	Sigma Aldrich	A4514	
Sodium hydroxide	Sigma Aldrich	71690	
Manganese sulfate monohydrate	Sigma Aldrich	M7634	
Zinc sulfate heptahydrate	Sigma Aldrich	Z4750	
Copper (II) sulfate pentahydrate	Sigma Aldrich	C7631	
Potassium iodine	Sigma Aldrich	P4286	
Cobalt (II) chloride hexahydrate	Sigma Aldrich	C3169	
Boric acid	Sigma Aldrich	B7660	
Ammonium heptamolybdate	Sigma Aldrich	A7302	
Myo-inositol	Sigma Aldrich	I5125	
D-Pantothenic acid hemicalcium salt	Sigma Aldrich	21210	
Thiamine, hydrochloride	Sigma Aldrich	T4625	
Nicotinic acid	Sigma Aldrich	N4126	
Pyridoxine	Sigma Aldrich	P5669	
Biotine	Sigma Aldrich	B4501	
Ergostérol	Sigma Aldrich	E6510	
Tween 80	Sigma Aldrich	P1754	
Ethanol absolute	VWR Chemicals	101074F	
Iron (III) chloride hexahydrate	Sigma Aldrich	236489	
L-Aspartic acid	Sigma Aldrich	A9256	
L-Glutamic acid	Sigma Aldrich	G1251	
L-Alanine	Sigma Aldrich	A7627	
L-Arginine	Sigma Aldrich	A5006	

L-Cysteine	Sigma Aldrich	C7352	
L-Glutamine	Sigma Aldrich	G3126	
Glycine	Sigma Aldrich	G7126	
L-Histidine	Sigma Aldrich	H8000	
L-Isoleucine	Sigma Aldrich	I2752	
L-Leucine	Sigma Aldrich	L8000	
L-Lysine	Sigma Aldrich	L5501	
L-Methionine	Sigma Aldrich	M9625	
L-Phenylalanine	Sigma Aldrich	P2126	
L-Proline	Sigma Aldrich	P0380	
L-Serine	Sigma Aldrich	S4500	
L-Threonine	Sigma Aldrich	T8625	
L-Tryptophane	Sigma Aldrich	T0254	
L-Tyrosine	Sigma Aldrich	T3754	
L-Valine	Sigma Aldrich	V0500	
¹³ C5-L-Valine	Eurisotop	CLM-2249-H-0.25	
¹³ C6-L-Leucine	Eurisotop	CLM-2262-H-0.25	
¹⁵ N-Ammonium chloride	Eurisotop	NLM-467-1	
ALPHA- ¹⁵ N-L-Glutamine	Eurisotop	NLM-1016-1	
U- ¹⁵ N4-L-Arginine	Eurisotop	NLM-396-PK	
Ethyl acetate	Sigma Aldrich	270989	
Ethyl propanoate	Sigma Aldrich	112305	
Ethyl 2-methylpropanoate	Sigma Aldrich	246085	
Ethyl butanoate	Sigma Aldrich	E15701	
Ethyl 2-methylbutanoate	Sigma Aldrich	306886	
Ethyl 3-methylbutanoate	Sigma Aldrich	8.08541.0250	
Ethyl hexanoate	Sigma Aldrich	148962	
Ethyl octanoate	Sigma Aldrich	W244910	
Ethyl decanoate	Sigma Aldrich	W243205	
Ethyl dodecanoate	Sigma Aldrich	W244112	
Ethyl lactate	Sigma Aldrich	W244015	
Diethyl succinate	Sigma Aldrich	W237701	
2-methylpropyl acetate	Sigma Aldrich	W217514	
2-methylbutyl acetate	Sigma Aldrich	W364401	
3-methyl butyl acetate	Sigma Aldrich	287725	
2-phenylethyl acetate	Sigma Aldrich	290580	
2-methylpropanol	Sigma Aldrich	294829	
2-methylbutanol	Sigma Aldrich	133051	
3-methylbutanol	Sigma Aldrich	309435	
Hexanol	Sigma Aldrich	128570	
2-phenylethanol	Sigma Aldrich	77861	
Propanoic acid	Sigma Aldrich	94425	
Butanoic acid	Sigma Aldrich	19215	
2-methylpropanoic acid	Sigma Aldrich	58360	
2-methylbutanoic acid	Sigma Aldrich	193070	

3-methylbutanoic acid	Sigma Aldrich	W310212	
Hexanoic acid	Sigma Aldrich	153745	
Octanoic acid	Sigma Aldrich	W279900	
Decanoic acid	Sigma Aldrich	W236403	
Dodecanoic acid	Sigma Aldrich	L556	
Fermentor 1L	Legallais	AT1357	Fermenter handmade for fermentation
Disposable vacuum filtration system	Dominique Deutscher	029311	
Fermenters (250 ml)	Legallais	AT1352	Fermenter handmade for fermentation
Sterile tubes	Sarstedt	62.554.502	
Fermentation locks	Legallais	AT1356	Fermentation locks handmade for fermentation
BactoYeast Extract	Becton, Dickinson and Company	212750	
BactoPeptone	Becton, Dickinson and Company	211677	
Incubator shaker	Infors HT		
Particle Counter	Beckman Coulter	6605697	Multisizer 3 Coulter Counter
Centrifuge	Jouan		GR412
Plate Butler Robotic system	Lab Services BV	PF0X-MA	Automatic instrument
Plate Butler Software	Lab Services BV		Robot monitor software
RobView			In-house developed calculation software
My SQL			International source database
Cimarec i Telesystem Multipoint Stirrers	Thermo Fisher Scientific	50088009	String Drive 60
BenchBlotter platform rocker	Dutscher	60903	
Ammonia enzymatic kit	R-Biopharm AG	5390	
Spectrophotometer cuvettes	VWR	634-0678	
Spectrophotometer UviLine 9400	Secomam		
Amino acids standards physiological - acidics and neutrals	Sigma Aldrich	A6407	
Amino acids standards physiological - basics	Sigma Aldrich	A6282	
Citrate lithium buffers - Ultra ninhydrin reagent	Biochrom	BC80-6000-06	
Sulfosalicylic acid	Sigma Aldrich	S2130	
Norleucine	Sigma Aldrich	N1398	
Biochrom 30 AAA	Biochrom		
EZChrom Elite	Biochrom		Instrument control and Data analysis software
Ultropac 8 resin Lithium	Biochrom	BC80-6002-47	Lithium High Resolution Physiological Column
Filter Millex GV	Merck Millipore	SLGVX13NL	Millex GV 13mm (pore size 0.22 µm)
Membrane filter PALL	VWR	514-4157	Supor-450 47mm 0.45µm
Vacuum pump Millivac Mini	Millipore	XF5423050	
Aluminium smooth weigh dish 70mm	VWR	611-1380	
Precision balance	Mettler		Specifications AE163

Dimethyl sulfoxid dried	Merck	1029310161	(max. 0.025% H ₂ O) SeccoSolv
Combustion oven	Legallais		
Pierce BCA protein assay kit	Interchim	UP40840A	
Formic acid	Fluka	94318	
Hydrogen peroxide	Sigma Aldrich	H1009	
Hydrochloric Acid Fuming 37% Emsure	Merck	1003171000	Grade ACS,ISO,Reag. Ph Eur
Lithium acetate buffer	Biochrom	80-2038-10	
Commercial solution of hydrolyzed amino acids	Sigma Aldrich	AAS18	
L-Methionine sulfone	Sigma Aldrich	M0876	
L-Cysteic acid monohydrate	Sigma Aldrich	30170	
Pyrex glass culture tubes	Sigma Aldrich	Z653586	
Pyridine	Acros Organics	131780500	99% Extrapure
Ethyl chloroformate	Sigma Aldrich	23131	
Dichloromethane	Sigma Aldrich	32222	
Vials	Sigma Aldrich	854165	
Microinserts for 1.5ml vials	Sigma Aldrich	SU860066	
GC/MS	Agilent Technologies	5890 GC/5973 MS	
Chemstation	Agilent Technologies		Instrument control and data analysis software
Methanol	Sigma Aldrich	34860	Chromasolv, for HPLC
Acetonitrile	Sigma Aldrich	34998	ChromasolvPlus, for HPLC
N,N-Dimethylformamide dimethyl acetal	Sigma Aldrich	394963	
BSTFA	Sigma Aldrich	33024	
DB-17MS column	Agilent Technologies	122-4731	30m*0.25mm*0.15µm
Sodium sulfate, anhydrous	Sigma Aldrich	238597	
Technical nitrogen	Air products	14629	
Zebtron ZB-WAX column	Phenomenex	7HG-G007-11	30m*0.25mm*0.25µm
Helium BIP	Air products	26699	
Glass Pasteur pipettes	VWR	612-1702	