

Sherlock Equipment and Consumables List

Phospholipid Fatty Acid (PLFA) Extraction Method

Purpose

To provide a complete list of all the necessary laboratory equipment, reagents and supplies needed for operation of the Sherlock Microbial Identification System (MIS) using the PLFA extraction technique.

Note: These are U.S. sources. Depending on country, local source and part # may vary.

Important Information

If you have problems providing any of the following, please contact MIDI, Inc. for assistance. This list does not include the Agilent consumables that are ordered with a full Sherlock System. The source and part number are listed for convenience only. No endorsement is implied. **Items marked with an asterisk (*) have NO SUBSTITUTES.**

SAMPLE PREPARATION - REAGENTS

ITEM – Manufacturer	USED IN REAGENT #	SIZE	SOURCE	PART #
Chloroform, HPLC Grade	3,6,Wash	1L	Fisher Scientific	C606-1
Methanol, HPLC grade (99.9% min.) Fisher Scientific	1,4,7	1L / 4L	Fisher Scientific	A452-1 / A452-4
Hexanes, HPLC grade (99.9% min.) Fisher Scientific	Dilute & Wash Rgts.	1L / 4L	Fisher Scientific	H302-1 / H302-4
Potassium Hydroxide, ACS Grade, Pellets	4	500g	Sigma Aldrich	221473-500G
Toluene, HPLC Grade	4	1L	Sigma Aldrich	270377
Acetic Acid, Glacial	5	500mL	Fisher Scientific	A35-500
Potassium Hydrogen Phosphate	1	100g	Fisher Scientific	P288-100
Potassium DiHydrogen Phosphate	1	500g	Fisher Scientific	P386-500
Acetone, HPLC Grade	Wash Rgt	1L	Fisher Scientific	A949-1
Deionized water (DI)	1,2,5,7		Various	
1,2-dinonadecanoyl-sn-glycero-3-phosphocholine (also called 19:0 PLFA) Avanti Polar Lipids	1	Powder In CHCl ₃	Avanti Polar Lipids	850367P 850367C

SAMPLE PREPARATION – CONSUMABLES & EQUIPMENT

ITEM – Manufacturer	SIZE	SOURCE	PART #
0.5-5ml BrandTech Brand Dispensette III bottle-top dispensers (For Reagent # 2) BrandTech Scientific # 4701131	Each 1 Needed	Fisher Scientific	13-688-227
0.5-5ml BrandTech Analog Dispensette organic bottle-top dispenser (For Reagents # 1,3,6) BrandTech Scientific # 4731131	Each 3 Needed	Fisher Scientific	13-688-270
Fisherbrand Graduated Volumetric Bottles with PTFE Faced PE-Lined Caps	Case of 24 5 Needed	Fisher Scientific	02-911-460
Kimax culture tubes, 13x100mm with PTFE-lined screw caps, Borosilicate glass, reusable OR Kimble Chase # 45066A-13100	Pack of 72	Fisher Scientific	14-930-10A
Fisherbrand Disposable Borosilicate Glass Tubes AND Kimble Black Phenolic Screw Caps (Can be washed and reused)	Case of 1000 Case of 300	Fisher Scientific	14-959-35C 14-930-15D
Kimax Tubes 16x100mm with PTFE-lined Screw Caps, Borosilicate Glass OR	Pack of 72 Case of 288	Fisher Scientific	14-930-10B
Fisherbrand Disposable Borosilicate Glass Tubes AND Kimble Black Phenolic Screw Caps (Can be washed and reused)	Case of 1000 Case of 300	Fisher Scientific	14-959-35AA 14-930-15E
Bel-Art Scienceware Poxygrid test tube racks (72 slots) 13mm Tubes Fisher Scientific	Each 2 Needed	Fisher Scientific	14-793-14
Bel-Art Scienceware Poxygrid test tube racks (72 slots) 16mm Tubes Fisher Scientific	Each 2 Needed	Fisher Scientific	14-793-12
2ml clear GC autosampler vials, screw cap Thermo Scientific # C4000-1	Pack of 100	Fisher Scientific	03-377A
Screw caps, PTFE/Silicone/PTFE septa Restek # 24498	Pack of 1000	Fisher Scientific	06-718-916
250µl, glass conical inserts	Pack of 100	Labsphere Inc	05-09-0129
1.5mL Glass Conical Vials	Pack of 100	Lab Supply Distrib.	4150-944
Digital vortex mixer Fisher Scientific	Each	Fisher Scientific	02-215-370 02-215-371 (230V)
Pasteur pipettes, Borosilicate glass, 5.75in., disposable Kimble Chase # 63A53	Pack of 250	Fisher Scientific	22-037-514

ITEM – Manufacturer	SIZE	SOURCE	PART #
Bel-Art Scienceware Pipette Pump Pipetter	Each	Fisher Scientific	13-683B
PFA Pipette Tips, 100uL *	Pack of 10 Pack of 96	Elemental Scientific	ES7000-0101 ES7000-0111
PFA Pipette Tips, 1000uL *	Pack of 10 Pack of 60	Elemental Scientific	ES7000-1001 ES7000-1011
Thermo Scientif Finnpiquette F1 Adjustable-Volume Pipettes 10-100uL	Each 1 Needed	Fisher Scientific	14-386-306
100-1000uL	1 Needed		14-386-309
Lyophilizer, SP Scientific 25L or Functional Equivilent SP Scientific VirTis Freezemobile Freeze Dryer		SP Scientific	25ES
Labconco CentriVap Vacuum Concentrator		Labconco	7810014 (USA) 7810032 (Europe) 7810036 (UK) 7810040 (Australia & China)
Labconco CentriVap -84 ⁰ C Cold Trap		Labconco	7460020 (USA) 7460030 (Europe) 7460035 (UK) 7460037 (Australia & China)
Labconco CentriVap Acid-Resistant 12-13mm Rotor		Labconco	7455101
Labconco Rotary Vane Vacuum Pump OR		Labconco	1472100 (USA) 7739400 (INTL)
Labconco Vaccubrand Hybrid Pump		Labconco	7584002 (USA) 7584000 (INTL)
Eppendorf 5804 Centrifuge	Each	Fisher Scientific	05-400-90 (USA) 05-400-91 (INTL)
Eppendorf 5804 Centrifuge Four-Place Swinging Bucket Rotor	Each	Fisher Scientific	05-400-94
Tube Adapter; 15mL, 7 Slots for 16x100mm Tubes	Pack of 2	Fisher Scientific	05-400-98
Tube Revolver (must rotate 360° at 8 rpm or higher). Thermo Scientific # 88881001	Each	Fisher Scientific	11-676-341 11-676-342 (240V)
5mL / 7mL Paddles for the Tube Revolver Thermo Scientific # 88881006	Pack of 2	Fisher Scientific	90-691-37

ITEM – Manufacturer	SIZE	SOURCE	PART #
96 Well Chromatography Plate OR	Each	Phenomenex	8E-S012-DGB
96 Well Chromatography Plate Discovery DSC-Si 50mg	Each	Sigma Aldrich	575608-U
3M Empore Vacuum Manifold Assembly	Each	Fisher Scientific	14-378-60
Vacuum Pump for Vacuum Manifold Assembly OR		Multiple	
House Supplied Vacuum		Multiple	
pH Meter with Calibration Buffers		Multiple	
Sonicating Bath		Multiple	
Fume/Biological Hood		Multiple	
Approved solvent disposal container		Multiple	
Incubator: 37°C +/-2°C		Multiple	
Storage Freezer: -20°C +/-2°C		Multiple	

GAS SUPPLY REQUIREMENTS

ITEM – Manufacturer	SPECS.	SOURCE	PART #
Hydrogen (Carrier Gas)			
Hydrogen gas, 99.999% purity or higher OR	99.999% min.	Local Vendor	
Hydrogen generator, 150 cc/min or higher Parker Balston / Parker Hannifan # H2PD-150	150 cc/min (min.)	Fisher Scientific	NC0357175
Nitrogen (Makeup Gas)			
Nitrogen gas, 99.999% purity or higher	99.999% min.	Local Vendor	
Industrial Grade Air (Makeup Gas)			
Air, industrial grade, dry OR	< 1ppm THC	Local Vendor	
Zero air generator (if using house air)	1,000 cc/min (min.)	Parker Balston	75-83

Note: Before ordering gases, see your local gas supply representative to confirm the CGA tank fitting numbers. Some gas suppliers furnish “instrument” or “chromatographic” purity grades intended for chromatographic use (names vary with supplier). The purity should be specified when possible. For optimal Sherlock MIS performance, follow the gas purity recommendations.

MIDI SUPPLIED ITEMS

Sherlock MIS Calibration Standards

ITEM	SIZE	SOURCE	PART #
*Sherlock MIS PLFA Calibration Mix	Box of 4	MIDI	1208

Sherlock MIS Certified Injection Port Liners

ITEM	SIZE	SOURCE	PART #
*Injection port liners – flip-top 6890 and 6850 GCs	Box of 10	MIDI	1221-F
*Injection port liners – 6890 and 6850 GCs w/o flip top	Box of 10	MIDI	1221
*Injection port liners – 7820 and 7890 GCs	Box of 10	MIDI	1221

Sherlock MIS Certified Ultra 2 Capillary Columns

ITEM	SIZE	SOURCE	PART #
*MIDI Column for 6850, 6890, 7820 & 7890 GCs	Each	MIDI	Column G