

Sherlock Equipment and Consumables List Traditional Extraction Methods

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 traditional (90 minute) 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 growth media for aerobic bacteria and other items marked with an asterisk (*) have NO SUBSTITUTES.** See Sherlock MIS Operating Manual, Appendix B, for details of other growth media used for other libraries. The source and part number are listed for convenience only. No endorsement is implied.

SAMPLE PREPARATION - REAGENTS

ITEM – Manufacturer	USED IN REAGENT #	SIZE	SOURCE	PART #
Sodium hydroxide, ACS grade, pellets (98.0% min.) Avantor, Macron Fine Chemicals # 7708-10	1, 4	500 g	Fisher Scientific	MK7708500
Methanol, HPLC grade (99.9% min.) Fisher Scientific	1, 2	1L / 4L	Fisher Scientific	A452-1 / A452-4
Hexanes, HPLC grade (98.5% min.) Fisher Scientific	3 & Wash Rgt.	1L / 4L	Fisher Scientific	H302-1 / H302-4
Sodium chloride, ACS grade Fisher Scientific	5	500g	Fisher Scientific	S271500
*Hydrochloric acid, 6.00N, Packaged in Glass *Ricca Chemical # 3750.1-32	2	1L	Fisher Scientific	37-501-32
Methyl-tert butyl ether (MTBE), HPLC grade (99.0% min.) Fisher Scientific	3 & Wash Rgt.	4L	Fisher Scientific	E127-4
Deionized water (DI) water	1, 4, 5		Various	

SAMPLE PREPARATION – CONSUMABLES & EQUIPMENT

ITEM – Manufacturer	SIZE	SOURCE	PART #
0.5-5ml BrandTech Brand Dispensette III bottle-top dispensers (For Reagents # 1, 2 and 4) BrandTech Scientific # 4701131	Each 3 Needed	Fisher Scientific	13-688-227
0.5-5ml BrandTech Analog Dispensette organic bottle-top dispenser (For Reagent # 3) BrandTech Scientific # 4731131	Each 1 Needed	Fisher Scientific	13-688-270

ITEM – Manufacturer	SIZE	SOURCE	PART #
10 µl disposable inoculating loops, yellow Fisher Scientific	Case of 250	Fisher Scientific	22-363-600
Kimax culture tubes, 13x100mm with PTFE-lined screw caps, Borosilicate glass, reusable Kimble Chase # 45066A-13100	Pack of 72	Fisher Scientific	14-930-10A
Bel-Art Scienceware Poxygrid test tube racks (72 slots) Fisher Scientific	Each 2 Needed	Fisher Scientific	14-793-14
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 polyspring, glass conical inserts Thermo Scientific # C4010630	Pack of 100	Fisher Scientific	03-375-3A
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
Digital vortex mixer Fisher Scientific	Each	Fisher Scientific	02-215-370 02-215-371 (230V)
Isotemp digital-control water baths, 10L or larger (one for boiling step, one for 80°C step) Fisher Scientific	Each 2 Needed	Fisher Scientific	15-462-10Q 15-462-11Q (230V)
Pasteur pipettes, Borosilicate glass, 5.75in., disposable Kimble Chase # 63A53	Pack of 250	Fisher Scientific	22-037-514
Approved solvent disposal container		Multiple	
Fume/Biological Hood		Multiple	

Note: Do not use heating blocks as a substitute for the two required water baths. The heat transfer of water is required to maintain proper temperature control during the procedure. If performing large numbers of samples at once, you should consider a 20L water bath size.

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	

ITEM – Manufacturer	SPECS.	SOURCE	PART #
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.

GROWTH MEDIA – ENVIRONMENTAL AEROBES (TSBA)

ITEM – Manufacturer	SIZE	SOURCE	PART #
Customer-prepared Media (more economical)			
*Difco Brand Granulated Agar BD # 214530	500g	Fisher Scientific	DF0145-170
*BBL Brand Dehydrated Culture Media: Trypticase Soy Broth (Soybean-Casein Digest Medium) BD # 211768	500g	Fisher Scientific	B11768
Plastic Petri dishes (15x100mm) Thermo Scientific # R80115	Case of 500	Fisher Scientific	R80115
OR (Prepared Media)			
*BBL Brand Prepared Plated Media: Trypticase Soy Broth (Soybean-Casein Digest Medium) with Agar Becton Dickinson (BD) Incubator: 28°C +/-2°C	Pack of 100	BD Multiple	299610
* QC Strain – <i>Bacillus subtilis</i> ATCC 6633	Each	ATCC (USA) DSMZ (Germany)	ATCC 6633 DSM 347

GROWTH MEDIA – CLINICAL AEROBES (CLIN)

ITEM – Manufacturer	SIZE	SOURCE	PART #
*BBL Brand Prepared Plated Media: Trypticase Soy Agar (TSA II) with 5% defibrinated sheep blood BD # 221239	Pack of 20	Fisher Scientific	B21239X
*BBL Brand Prepared Plated Media: Mueller Hinton Chocolate Agar BD # 221860	Pack of 20	Fisher Scientific	B21860X
*GasPak EZ CampyPouch System BD # 260685	Pack of 20	Fisher Scientific	B-260685

ITEM – Manufacturer	SIZE	SOURCE	PART #
*BBL Brand Lactobacilli MRS broth BD # 288130	500g	Fisher Scientific	DF0881-17-5
*BBL Brand Prepared Plated Media: Buffered Charcoal Yeast Extract (BCYE) agar for Legionella BD # 221808	Pack of 10	Fisher Scientific	B21808
*BBL Brand Prepared Plated Media: Middlebrook 7H10 for Mycobacteria w/ OADC enrichment BD # 221174	Pack of 20	Fisher Scientific	B21174X
Incubator: 35°C +/-2°C		Multiple	
*QC Strain – <i>Pseudomonas aeruginosa</i> ATCC 27853		ATCC (USA) DSMZ (Germany)	ATCC 27853 DSM 1117

MIDI SUPPLIED ITEMS

Sherlock MIS Calibration Standards

ITEM	SIZE	SOURCE	PART #
*Sherlock MIS “Concentrated” Calibration Mix Replacement for Part # 1200-A and Part # 1300-AA	Box of 4	MIDI	1300-C
*Sherlock MIS Eukary Calibration Mix	Box of 4	MIDI	1201-A
*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