



## Equipment Requirements for a MCH Centre Laboratory

The following list has been prepared based on common equipment requirements for a Mother and Child Health (MCH) Centre laboratory.

The list is intended to serve as a guideline and would need to be adapted to country specific needs.

## Equipment Requirements for a MCH Centre Laboratory

### Major Equipment

No	Description	QTY	Remarks
1	Binocular Microscope, 220V, complete with:	1	
	- Eyepieces, widefield 10x	2	
	- Objectives x 10, 40 and x 100 oil immersion, each	1	
	- Plastic cover	1	
	- Mechanical stag	1	
	- Spare bulbs	3	
2	Centrifuge, electric, angle head, 8 tubes	1	
3	Haematocrit centrifuge, timer, one speed	1	
4	Colorimetre, digital readout, 220V, with	1	
	- built in filters, range 400 - 700nm		
	- Spare bulbs	3	
	- Plastic cuvettes 10 mm	20	
	- Glass cuvettes 10mm	4	
5	Three Beam Balance, sensitivity 0.1g, with	1	
	- Weight Set	1	
6	Water distillation unit, electric still, 1gal./hr.	1	bigger capacity if shared with other units
7	Hotair oven, 30-200 degree, 0.05 cubic-metre	1	
8	Autoclave, small capacity, (about 12ltr) with	1	bigger capacity if shared with other units
	- Spare safety valves	4	
	- Spare safety gaskets	2	
9	Rotator with timer for agglutination tests, 220V	1	
10	Blood Pipettes Shaker, electrical, 220V	1	
11	Refrigerator with freezer compartment, small	1	bigger capacity if shared with other units

### Minor Equipment

No	Description	QTY	Remarks
1	Neubauer Counting Chamber w/ Cover Glasses	2	
2	Westergreen ESR rack with	1	
	- ESR Glass tubes	20	
3	Interval timer 1 h (steps of 1 min)	2	
4	Stop watch	1	
5	Hand tally counter	1	
6	Water-jet pump to clean pipettes	1	
7	Stainless steel staining rack for a sink	1	
8	Drying rack for glass and plastic ware	1	
9	Manual differential cell counter up to 100 cells	1	
10	Test tube rack, metal to hold 20 tubes/ dia.15mm	4	
11	Pipetting aid rubber ball, Assistant	1	
12	Small rubber tubing w/ mouth piece to fit blood diluting pipettes	4	
13	Spirit lamp, metal with spare wicks	2	
14	Tool kit (screw-driver, pair of pliers, hammer)	1	
15	Tourniquet	2	
16	Diamond pencil for glass writing	1	
17	Grease pencil	10	
18	Test tube clamp, wooden, 13 to 19mm diametre	2	
19	Blood collection tray, organiser tray	1	

## Equipment Requirements for a MCH Centre Laboratory

### Glassware

No	Description	QTY	Remarks
1	Beaker, glass		
	100 ml	2	
	250 ml	2	
	500 ml	2	
2	Erlenmeyer flask, narrow mouth, heat-resistant glass		
	100 ml	2	
	250 ml	2	
	500 ml	2	
3	Measuring cylinder, graduated, glass		
	1000 ml	1	
	50 ml	2	
	250 ml	2	
4	Volumetric flask, with stopper		
	500 ml	2	
	1000 ml	1	
	100 ml	1	
5	Volumetric flask, with stopper		
	250 ml	1	
	500 ml	1	
	1000 ml	1	
5	Centrifuge tube, ungraduated, 10 ml conical, thick glass	100	
6	Test tube, glass, heat resistant		
	75 x 11 mm	50	
	100 x 13 mm	50	
7	Test tube, glass, heat resistant		
	150 x 15 mm	50	
	Pipette, 20 ul	10	
8	Pipette, WBC Diluting with white bead	10	
9	Pipette, RBC Diluting with white bead	5	
10	Pipette, volumetric, bulb		
	1 ml	2	
11	Pipette, graduated,		
	5 ml	2	
	10 ml	5	
12	Pipette, graduated,		
	1 ml	5	
	5 ml	5	
12	Glass rods, 150 x 4 mm	20	
13	Funnel, glass		
	80 mm diameter	2	
	100 mm diameter	2	
14	120 mm diameter	1	
	Dropping Bottles with Lugs and Ground Glass Stoppers		
	30 ml	6	
15	50 ml	6	
	Dropping Bottles with Ground Glass Stopper/Pipette		
16	30 ml	6	
	50 ml	6	
	Amber Glass Reagent Bottles, narrow mouth		
17	250 ml	6	
	500 ml	6	
	1000ml	6	
17	Petri dish with lid, glass, 90 mm diameter	3	

## Equipment Requirements for a MCH Centre Laboratory

### Consumables

No	Description	QTY	Remarks
1	Microscope slides, 75 x 25 mm, box of 100	10	
2	Cover slips, 22 x 22 x 0.22mm, pack of 10 x 100	5	
3	Lancet, disposable, sterile, box of 200	5	
4	Syringe, Luer, plastic, disposable 2 ml or Vacutainer Brand tube	300	
5	Syringe, Luer, plastic, disposable 5 ml or Vacutainer Brand tube	20	
6	EDTA tubes, Vacutainer Brand	100	
7	Microhaematocrit capillary, with heparin, pack of 100	6	
8	Microhaematocrit capillary, without heparin, pack of 100	10	
9	Capillary tube Sealant Compound	2	
10	Container for Stool specimen collection with lid	1000	
11	Container for Urine Specimen Collection	1000	
12	Container for Sputum collection, wide mouth, plastic with lid	100	
13	Lens paper for Microscope, book of 50 sheets	5	
14	Filter Paper, Whatman No.1, box of 100 sheets		
	90 mm	1	
	150 mm	1	
	240 mm	1	
15	Wooden applicators, box of 1000	2	
16	Autoclave tape, rolls	1	
17	Pipettes, disposal, plastic bulb, 3 ml	100	
18	Cotton Gauze, non-sterile, 500g rolls	5	
19	Cotton wool (absorbent), non-sterile 500g rolls	10	
22	Rubber gloves, autoclavable, size M and L, pairs	4	
23	Gloves, disposal, size M and L, boxes	10	
24	Graph paper, sheets, book	1	
25	Laboratory record books	6	
26	Stock and Inventory index cards	200	
27	Pencils, HB box of 12	1	

### Others

No	Description	QTY	Remarks
1	Broad tipped forceps, Steel about 115mm long	2	
2	Scissors all purpose, 180 mm	1	
3	Buckets, metal, 15 ltr	2	
4	Test tube brush	3	
5	Brush for bottle and flasks	5	
6	Needle collection container,	4	
7	Funnel, polyethylene		
	65 mm diameter	2	
	150 mm diameter	2	
	100 mm diameter	1	
8	Drying rack for glass slides	1	
9	Set of spatula for weighing chemicals	1	
10	Handle for wire loop, metal	2	
11	Wire inoculation loops,	6	
12	Scalpel handle, stainless steel, for No.22 blades	1	
13	Plastic basin, 5 litre	2	
14	Plastic bucket, 15 litre	2	
15	Wash bottle, polyethylene, 250 ml	2	

## Equipment Requirements for a MCH Centre Laboratory

### Reagents

No	Description	QTY	Remarks
1	Acetone (Gram stain)	2 ltr	
2	Acetic acid 36% (WBC count)	500ml	
3	EDTA (anticoagulant) not required if Vacutainer used	100g	
4	Ether (concentration of parasites)	2 ltr	
5	Formalin 40% (concentration of parasites, fixative)	2 ltr	
6	Basic fuchsin (Gram and Ziehl Nelson Stain)	100g	
7	Gentian violet ( Gram and Turk solution)	100g	
8	Methanol (Gram & Ziehl Nelson Stain, decolourizer, spirit lamp)	5 ltr	
9	Iodine (Cyst identification, Gram stain )	100g	
10	Methylene blue (ZN stain, WBC stain in stool)	100g	
11	Phenol crystals (Carbon Fuchsin)	500 g	
12	Potassium iodide (Gram Stain)	500 g	
13	Drabkin's solution	2 ltr.	
14	Standard for Cyanmethaemoglobin method	5	
15	Immersion oil (microscope)	250ml	
16	Potassium hydroxide (Fungus examination)	500 g	
17	Eosin powder (Cysts staining)	10 g	
18	Sodium metabisulphite (Sickle Cell Screening)	500 g	
19	Vaseline (Sickle cell screening)	250 g	