

## APPENDICES

### Appendix 1

#### Media

##### 1- Nutrient Agar

- |                    |      |
|--------------------|------|
| - Peptone          | 5 g  |
| - Beef extract     | 3 g  |
| - Sodium chloride  | 8 g  |
| - Agar             | 12 g |
| - Distilled water  | 1 L  |
| - pH $6.6 \pm 0.2$ |      |

Sterilization by autoclave at 121°C for 15 min.

##### 2- MacConkey's Agar

- |                    |        |
|--------------------|--------|
| - Peptone          | 20g    |
| - Lactose          | 10g    |
| - Bile salt        | 5g     |
| - Sodium chloride  | 5g     |
| - Neutral red      | 0.075g |
| - Agar             | 12g    |
| - Distilled water  | 1L     |
| - pH $6.8 \pm 0.2$ |        |

Sterilization by autoclave at 121°C for 15 min.

##### 3- KIA (Kligler's Iron Agar)

- |                    |      |
|--------------------|------|
| - Lab-lemco powder | 3 g  |
| - Yeast extract    | 3 g  |
| - Peptone          | 20 g |
| - Sodium chloride  | 5 g  |
| - Lactose          | 10 g |

- Ferric citrate 0.3 g
- Sodium thiosulphate 0.3 g
- Phenol red 0.05 g
- Agar 12 g
- Distilled water 1 L
- pH  $6.6 \pm 0.2$

Sterilization by autoclave at 121°C for 15 min.

#### **4- Peptone water**

- Peptone 10 g
- Sodium chloride 5 g
- Distilled water 1 L
- pH  $6.6 \pm 0.2$

Sterilization by autoclave at 121°C for 15 min.

#### **5- Simmon's Citrate Medium**

- Dipotassium phosphate 1.5 g
- Ammonium dihydrogen phosphate 1 g
- Sodium chloride 5 g
- Sodium citrate 2 g
- Magnesium sulfate 0.2 g
- Bromothymol blue 0.08 g
- Distilled water 1 L
- pH  $6.6 \pm 0.2$

Sterilization by autoclave at 121°C for 15 min.

#### **6- Urea Agar**

- Peptic digest of animal tissue 1 g
- Dextrose 1 g
- Sodium chloride 5 g

- Disodium phosphate 1.20 g
- Mono potassium phosphate 0.80 g
- Phenol red 0.012 g
- Agar 15 g
- Distilled water 1 L
- pH  $6.8 \pm 0.2$

24 g was suspended in 950 ml D.W. dissolving the medium completely was done by heat until boiling. Sterilization was done by autoclaving at 10 lbs pressure (115°C) for 20 minutes. The medium was cooled to 50°C and aseptically addition of 50 ml of sterile 40% urea solution was done and mixed well. Then, the medium dispensed into sterile tubes and allowed to set in the slanting position. After that, the medium not heat or reheat due to urea decomposes very easily.

## **Appendix 2**

### **Reagents**

#### **2- Acetone Alcohol decolorizer**

- Acetone 500 ml
- Ethanol or methanol, absolute 47 ml
- Distilled water 25 ml

**Storage:** in a safe place, (highly flammable)

#### **3- Kovacs reagent**

- Dimethyle amino benzaldehyde 2 g
- Isoamyl alcohol 30 g
- HCL 50 ml

#### **4- Normal saline**

- NaCl 8.5 g
- Distilled water 1 L

**Storage:** at room temperature

### **Appendix 3**

#### **Stains**

##### **1- Crystal violet**

- |                    |      |
|--------------------|------|
| - Crystal violet   | 20 g |
| - Ammonium oxalate | 9 g  |
| - Ethanol absolute | 95 g |
| - Distilled water  | 1 L  |

##### **2- Lugol's iodine solution**

- |                    |      |
|--------------------|------|
| - Iodine           | 10 g |
| - Potassium iodide | 20 g |
| - Distilled water  | 1 L  |

##### **3- Safranin**

- |                   |        |
|-------------------|--------|
| - Safranin        | 0.5 g  |
| - Distilled water | 100 ml |

### Bacterial load on mobile phones of students in universities

University	Sample No.	Bacterial load CFU/ml
1- SUST	1	$1.11 \times 10^8$
	2	$2 \times 10^7$
	3	$7 \times 10^7$
	4	$1.28 \times 10^6$
	5	$4 \times 10^5$
	6	$1.15 \times 10^6$
	7	$1.16 \times 10^8$
2- Al-Mughtaribeen University	8	$3.8 \times 10^5$
	9	$5.4 \times 10^5$
3- National Ribat University	10	$2.94 \times 10^8$
	11	$2.97 \times 10^8$
	12	$3 \times 10^8$
	13	$2.9 \times 10^8$
	14	$2.95 \times 10^8$
	15	$2.9 \times 10^8$
	16	$3 \times 10^8$
	17	$2.95 \times 10^8$
4- Al-Zaiem Al-Azhari University	18	$3.2 \times 10^5$
	19	$2 \times 10^7$
	20	$3.5 \times 10^7$
	21	$1 \times 10^8$
	22	$9 \times 10^5$
	23	$2 \times 10^6$
	24	$3 \times 10^8$
	25	$4 \times 10^6$
	26	$3 \times 10^5$
	27	$1 \times 10^6$

	28	$1.95 \times 10^6$
	29	$3 \times 10^8$
	30	$2.98 \times 10^8$
	31	$6.3 \times 10^5$
	32	$4.6 \times 10^6$
	33	$1.85 \times 10^8$
	34	$7 \times 10^7$
Average of bacterial count	$11.78 \times 10^7$	