

## **Appendix (1)**

**Sudan University of Science and Technology**

**Collage of Graduate Studies**

**Microbiology Department**

### **Questionnaire**

**Title: Serodetection of anti *Helicobacter pylori*  
Antibodies (IgG , IgA) Among Students Suffering  
from Gastritis in Different Universities in Khartoum  
State**

**By:** safa Ahmed

**Supervisor:** Prof. Yousif Fadllala

**Data:** .....

**Name:** .....

**Sex:**

**Male**

☐

**female**

☐

**Age:** .....

**Have any gastrointestinal problem**

**Yes**

**No**

**Symptoms and complains:**

1- gastritis

2- pain in the upper abdominal

3- nausea or vomiting

**Previous diagnosis of Helicobacter pylori infection:**

**Yes**

**No**

**If yes the result is**

**Positive**

**negative**

**Any one at home has these symptoms?**

**Yes**

**No**

**Did you drinking coffee?**

**Yes**

**No**

**Did you drinking alcohol?**

**Yes**

**No**

**Did you smoking?**

**Yes**

**No**

## **Appendix (2)**

### **ELISA Sample Dilution**

**Patient samples are Diluted 1:101 in sample buffer**

Serum.....10 µl

Sample buffer.....1.0 ml

### **ELISA Buffer**

#### **1. Corbonate bicarbonate buffer (Coating buffer)**

**PH:6.9**

Na CO<sub>3</sub> anhydrous ..... 1.59 gm

NaHCO<sub>3</sub> ..... 2.93 gm

**Dissolve in liter D.W Adjust PH to by NaOH or HCL.**

#### **2. Phsphat buffer saline (PBS) / Teen 20 (washing buffer) PH7.4**

NaCl ..... 8 gm

Na<sub>2</sub>HPO<sub>4</sub> ..... 2.9 gm

$\text{KH}_2\text{PO}_4$  ..... 0.2 gm

$\text{KCl}$  ..... 0.2 gm

**Dissolve in liter distilled water than add 0.01 V/V  
polyoxy ethylene sorbitol monourate (Teen-20). Adjust  
PH by NaOH or HCl .**

**3.  $\text{H}_2\text{SO}_4$  (Stopping buffer) :**

**20 %  $\text{H}_2\text{SO}_4$**

20 ml .....  $\text{H}_2\text{SO}_4$

80 ml ..... D.W