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COURSE TITLE: MEDICAL BIOTECHNOLOGY

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ASSIGNMENT: OUTLINE THE TOXICITY VALUES AND DEFICIENCY MANIFESTATIONS OF THE FOLLOWING MINERALS

- A. POTASSIUM
- B. CALCIUM
- C. MAGNESSIUM
- D. CHLORINE

E. IRON

TOXICITY LEVEL OF POTASSIUM

Potassium becomes toxic when the level of potassium is above or below the normal potassium level which ranges from 150-160mEq/L.

Deficiency manifestation of potassium

- **Hypokalemia:** this is a clinical condition caused by the reduced level of potassium in the plasma.

TOXICITY OF CALCIUM

Calcium becomes toxic when it is above or below the normal calcium level of the body which is 9 – 11mg%.

Deficiency manifestation of calcium

- **Hypocalcemia:** this is characterised by lower level of plasma calcium.

TOXICITY OF MAGNESIUM

The toxicity of magnesium is expressed when the bodies magnesium is above or below the normal level of magnesium in the body which is 1 – 3.5mg/dl.

Deficiency of magnesium

- **Hypomagnesium :** it is an abnormally low serum magnesium level.

TOXICITY OF CHLORINE

Chlorine toxicity is due to an increase or decrease in the bodies chlorine level.

Deficiency of chlorine

- **Hypochloremia:** this is caused by a decrease in the bodies chlorine level. It is seen in severe vomiting, metabolic alkalosis, excessive sweating, Addison's disease.

TOXICITY OF IRON

Iron becomes toxic when it is in overload or in deficiency. The normal measurement for iron is 3 -5gm.

Deficiency of iron

- **Iron deficiency anemia:** it is caused by a reduction in the amount of haemoglobin synthesis and erythropoiesis.

