**AL- MUSTAQBAL UNIVERSITY**

**College Of Health And Medical Techniques**

**Prosthetic Dental Techniques Department**

**Second Grade**

**Second Semester**

**PRACTICAL BIOCHEMISTRY**

**For Prosthetic Dental Techniques Department**

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**PART 2**

**EXP. 6**

***GLYCATED HEMOGLOBIN***

**By**

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***GLYCATED HEMOGLOBIN***

**Hb A1c**, a glycated hemoglobin, is an indicator of long-term glycemic control.

***Principle:***

In the method presented, a preparation of hemolyzed whole blood is mixed with a weakly binding cation-exchange resin. The non-glycosylated hemoglobin (HbA0) binds to resin, leaving (HbA1) free to be removed by means of a resin separator in the supernatant. The percent of HbA1 is determined by measuring the absorbance value at 415 nm of the HbA1 fraction and of the total Hb fraction, calculating the ratio of absorbances (R), and comparing this ratio to that of a Glycohemoglobin standard carried through the same procedure.

Results are express as HbA1 but can be converted or derived as HbA1c by using a conversion factor of when using a HbA1c value for the standard.

***The Specimen:***

The preferred specimen is whole blood that has been collected in EDTA, heparin, or fluoride anticoagulant. Capillary blood may be used for some procedures such as immunoassay. A hemolysate of washed RBCs is tested. Whole blood may be stored for 1 week at 4ºC. Hemolystate may be stored for 4 to 7 days at 4ºC or 30 days at –70ºC.