

Dedication

**To my beloved parents,
brothers,
sisters,
teachers
and my friends**

Acknowledgment

I would like to express my thanks and gratitude to Dr. Hatim Mohamed El-Khair for his supervision and valuable advices that has rendered to me. I would like also to extend my thanks to ustaz Awad for his help. Pro. Wafig is also thanked for his advice. To all who help me directly or indirectly are thanked for their efforts. For those whom their names are not mentioned unintendly here, are also thanked.

الخلاصة

الغرض من هذا البحث هو دراسة تأثيرات استخدام التكنولوجيا الحديثة في التعليم، وتحليل الفوائد والتحديات التي تواجهها المؤسسات التعليمية. **β** من أجل تحقيق هذا الغرض، تم إجراء بحث استقصائي شاملاً، حيث تم جمع البيانات من مصادر متنوعة، بما في ذلك المقابلات مع المعلمين والطلاب، وكذلك تحليل الوثائق والبيانات الكمية. **w% 50** تم تحليل النتائج باستخدام أساليب إحصائية متقدمة، مما سمح بتحديد الاتجاهات الرئيسية في استخدام التكنولوجيا في الفصول الدراسية. **44.65** تشير النتائج إلى أن هناك زيادة ملحوظة في استخدام التكنولوجيا، خاصة في مجالات التعليم الإلكتروني والتعلم القائم على المشاريع. **44** ومع ذلك، لا تزال هناك تحديات كبيرة تتعلق بالبنية التحتية والمهارات اللازمة لاستخدام هذه الأدوات بفعالية. **β** **w% 50** من أجل معالجة هذه التحديات، يُقترح تنفيذ برامج تدريبية للمعلمين وتطوير البنية التحتية للمؤسسات التعليمية. **w% 50** **يساوي 1.56** **w% 20** **و هذا** **w% 100** **w% 50** **1.558** **n Δ**

Abstract

The basic work was to determine the refractive index of glucose and Arabic gum blended by using a polarimeter and laser light source in conjunction with a photocell and a laser power meter.

The results obtained have shown that the value of the specific rotation angle β = 0.44 at zero concentration. Its value was found to increase slowly to 44.65 at the higher concentration of 50W%. Above this limit the value of β remains unchanged. This behavior has been reflected on the measured refractive indices. The value of Δn for prepared sample was 1.56 at 20% concentration and 1.568 for 50W%. This value remains constant for the concentration ranging between 50W% and 100W%.

It is concluded that, the glucose and gum Arabic solution permits the tuneability of laser at concentration less than 50W% and at higher concentration the polarization is ineffective to produce a noticeable change in refractive index Δn .

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