

## *Dedication*

*I dedicate this work To my  
parents,  
To the soul of my uncle  
(MUSTAFA ELTAYEB)*

## ACKNOWLEDGMENTS

*First of all I thank Allah mighty, who provided me with health and ability to fulfill this work.*

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## ABSTRACT

This research was performed to investigate the physicochemical properties of foam and residues fractions of gum talha (*Acacia seyal var.seyal*).

The results showed that a foam fraction has moisture (7.65%) and residual has (6.23%). While residual fraction has Protein (1.75%) and Nitrogen content (0.28%) and foam has (1.925%) and (0.308%) respectively. Ash content was founded in residues (2.89%) and in foams (2.64%). K (0.090%), Ca (0.978%), Na (0.008%), and Mg (0.352%) were founded in residues and in foam were founded (0.068),(0.849%),(0.008) and (0.312%) respectively, Cr is founded in foam ( $2.29 \times 10^{-4}$ ) and founded in residues is ( $5.74 \times 10^{-5}$ ), Zn and Pb were not detected in both of which. Optical rotation and Viscosity were found in residues (+51) and (3.611) and in foam were found (+47) and (2.94) respectively. Foam fraction has pH (5.04) while residual has pH (4.33). Sugars such as; Rhamnose, Arabinose and Galactose were founded in foams (0.21865%), (2.2440 %) and (1.90245%) while residual has (0.1464%), (1.8664%) and (1.4715%) respectively.

## مستخلص البحث بالعربية

هذا البحث أجري لفحص الخواص الفيزيائية والكيميائية للرغوة والصبغ المترسب لصبغ الطلح.

تمت تجزئة الصبغ الى رغوة ومترسب، وأجريت الخواص الفيزيائية والكيميائية لكل منهما بالاضافة الى تحديد نوعية وكمية السكر في الصبغ.

النتائج اوضحت ان الرغوة تحتوي علي نسبة رطوبة تساوي (7.65%) بينما الراسب يحتوي علي نسبة رطوبة تساوي (6.23%). ووجد نسبة البروتين في الراسب (1.75%) وكذلك النتروجين (0.28%) بينما في الرغوة نسبة كل من البروتين والنتروجين تساوي (1.925%) و (0.308%) على التوالي. الرغوة تحتوي علي نسبة رماد تساوي (2.64%) بينما يحتوي الراسب علي نسبة رماد تساوي (2.89%). العناصر من بوتاسيوم، كالسيوم، ماغنسيوم وجدت في الراسب بنسبة (0.090%) ، (0.978%) ، (0.352%) علي التوالي بينما الرغوة تحتوي علي نسبة كل منهم (0.068%)، (0.849%) و (0.312%) على التوالي. الصوديوم متساوي في العينتين (0.008%). الكروم وجد في الرغوة بتركيز يساوي ( $2.29 \times 10^{-4}$ %) بينما في الراسب ( $5.74 \times 10^{-5}$ %). بينما الزنك والرصاص لم يظهر في الفحص. الدوران الضوئي واللزوجة للراسب هما (+51) و (3.611) علي التوالي بينما للرغوة (+47) و (2.94) على التوالي. رقم الاس الهيدروجيني للرغوة (5.04) وللراسب (4.33). النسبة المئوية للسكريات الرامينوز ، الارابينوز و الجلاكتوز للرغوة تساوي (0.2186%)، (2.2440%)، (1.90245%) علي التوالي بينما للراسب تساوي (0.1464%)، (1.8664%) و (1.4715%) على التوالي.