

Dedication

I dictate this project to

My parents

Brothers

And

Friends

Acknowledgements

I would like to express my sincere appreciation and gratitude to my supervisor Dr.mohammed Adam Abbo for the un failing guidance throughout the study and work on this project and without his assistance this project would not have been possible.

Abstract

Chloramphenicol and crystal violet were studied as models of organic pollutants , the two compounds were prepared by dissolving 500.00 mg in a liter of distilled water , 5 Cm³ of Fe⁺² (0.22M) was added to the mixture of reaction as a catalyst , the reaction initiated by addition of 5 Cm³ H₂O₂ (50% w/w) . The degradation of the compounds was tested by HPLC method which was used to follow the degradation of the compounds for 20 minutes, The results indicated that about 95% of chloramphenicol was decomposed while the crystal violet was decomposed completely. Spectrophotometer was used to determine the rate of degradation by measuring absorbance against time at different pH values in acidic medium and the results shows different response as pH varied. The highest rate was at pH 3.8 for chloramphenicol and at 4.6 and 5.1 for crystal violet.

الملخص بالعربي

الكوروفينيكل والبلوره البنفسجيه درست كنمازج للملوثات العضويه و تم تحضيرها باذابتها في 500. ملجرام في لتر من الماء المقطر و 5 مل من محلول الحديد الثنائي تم اضافتها الي خليط التفاعل كما بدأ التفاعل باضافة 5 مل من الهيدروجين بيروكسايد (50W/W%), وتكسير هذه المركبات تم اختباره بواسطه جهازالكروماتوغرافي خلال 20 دقيقه والنتائج اثبتت ان 95% من الكوروفينيكل تم تكسيره بينما البلوره البنفسجيه تم تكسيرها كليا بالا ضافه الي استخدام جهاز الأشعة فوق البنفسجيه والمرئيه لتحديد امتصاص ومعدل تكسير هذه المركبات مع الزمن باختلاف تركيز ايون الهيدروجين في محلول الوسط الحمضي والنتائج أعطت استجابته مختلفه مع تغير تركيز ايون الهيدروجين في الوسط الحمضي وكان أعلي تكسير في الوسط الحمضي 3.8 للكوروفينيكل و 4.6, 5.1 للبلوره البنفسجيه .

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