

نبات حمام قصر القطن

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الخلاصة:

القطن مادة سليولوزية طبيعية ، وتوجد عدة طرق لقصر القطن تهدف لإزالة الشوائب وأن طريقة استخدام البيروكسيد هي من أفضل الطرق لان لا توجد أية احتمالية للتفاعل مع القطن ولا تتكون مواد غير مرغوبة ، لذلك فأن استخدام بيروكسيد الهيدروجين بمحيط قاعدي تمكن السيطرة على سرعة القصر للحصول على درجة بياض جيدة وهي من الطرق المعروفة وأن تقليل الخسائر في المواد الكيماوية المتفككة قد درست في هذا البحث باستعمال ثلاث حالات مختلفة:

1. باستخدام محلول القصر .
 2. باستخدام محلول القصر بوجود سليكات الصوديوم مع استخدام فوسفات الصوديوم.
 3. باستخدام محلول غير مثبت.
- والنتائج العملية بصورة عامة تؤكد زيادة الثباتية حسب الترتيب الآتي لحمام القصر:

$$3 < 1 < 2$$

وأن نتيجة حمام القصر 2 طريقة تصاف كتطبيق جديد في تكنولوجيا كيمياء قصر القطن بالصناعة.

ABSTRACT:

One of the natural cellulose fibers is cotton there are many methods of bleaching cotton aim at remove as much impurity as possible ,prior to peroxide bleaching, because of there is no possibility of reactions with the cellulose and no formation of undesirable products Hydrogen peroxide was used as bleaching reagent with alkaline solution and its stability to control the rate of bleaching to get good whiteness with minimum chemical damage, this stability was studied in this paper by using normal conditions with three different cases such as:

1. By using bleach liquor only.

2. Bleach liquor in the presence of sodium silicate with sodium phosphate.
3. UN stabilized bleach liquor.

Experimental results generally shows that the increasing in the stabilities are in the following order:

Bath 2 > bath 1 > bath 3.

The result of bath 2 will be added to the literatures as new application in chemical technology of bleaching of cotton of industry.

INTRODUCTION:

The traditional methods of bleaching cotton ⁽¹⁾ aim at removing as much impurity as possible by prolonged design and boiling treatment, so that the actual bleaching process is carried out with sodium or calcium hypochlorite on almost pure cellulose.

The removal of impurities prior to peroxide bleaching ⁽²⁾ is not necessary since there is no possibility of reactions with the cellulose and no formation of undesirable products such as chloramines, which might later impair whiteness and fiber strength. In peroxide bleaching sever scouring and purification processes are undesirable since the natural impurities contained by the cotton enhance the stability of the bleach liquor.

The need for sever scouring to effect removal so that to promote absorbency is also unnecessary. As the research was carried out, several workers have indicated that night ⁽³⁾ absorbency is related to the posture of the primary wall of the fiber, rather than to removal of the wax.

It is believed that some of the stability, imparted ⁽⁴⁾ by the water-soluble impurities is due to the presence of protein. This has been followed up with experiments using protein from various other sources. Satisfactory stability and bleaching results have been obtained by using liquors stabilized party with silicate and party with proteins ⁽⁵⁾.

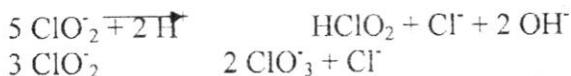
The concentration of hydrogen peroxide ⁽⁶⁾ used will depend on the final colour desired. In general a concentration of 0.1% w/w will produce a half-white and 0.14% w/w a three-quarter white.

Bleaching cotton with sodium chlorite can be safer and shorter than by the more traditional methods, as coring process can be omitted, the bleaching agent being applied to the loom state material. This does not only save time but also weight. Weight loss directly attributable to chlorite is about 2%.

Chlorite bleached ⁽⁷⁾ material are not generally susceptible to pink staining and have a low co-efficient of friction-properties which are particularly desirable for knitting yarns.

Bleaching with chlorite does not only occur under acid condition. Bleaching with neutral or alkaline chlorite is so slow as to be negligible, where it does occur it is accompanied by degradation.

Acidified solutions of chlorite are unstable decomposing to chlorine dioxide chlorate and chlorine ⁽⁸⁾.



The efficiency with which chlorite ⁽⁹⁾ is used also vary with pH.

EXPERIMENTAL:

Preparation of the bleaching solution:

1. 8.75 g/liter hydrogen peroxide 35%.
7.0 g/liter sodium silicate (79 °TW).
1.7 g/liter soda ash.
0.5 g/liter caustic soda.
2. Water in above replace by aqueous extract from 25 g. Iraqi cotton also made up to a total volume of 500 ml.

Three experiments were proceeded about stabilization of bleaching bath of cotton, and prepared according to table 1.