

UNITED STATES PATENT OFFICE.

EDGAR W. GEISLER, OF BROOKLYN, NEW YORK, ASSIGNOR TO R. H. COMEY BROOKLYN COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW JERSEY.

TREATING GREEN VEGETABLE FIBERS.

No Drawing.

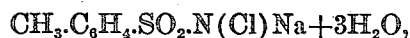
Application filed March 7, 1925. Serial No. 13,353.

To all whom it may concern:

Be it known that I, EDGAR W. GEISLER, a citizen of the United States, and residing at Brooklyn, Kings County, State of New York, have invented certain new and useful Improvements in Treating Green Vegetable Fibers, of which the following is a specification.

This invention relates to the preparation for subsequent bleaching or dyeing, as the case may be, of green vegetable fibers, strands, stalks, and the like, such, for example, as Mexican palms, green wheat strands, Chinese grasses and straws, as well as other materials of similar nature, in fact, any vegetable fibers containing green (chlorophyll) which are to be prepared for subsequent bleaching or dyeing.

The process involves the use of activin, the sodium derivative of N-chlor-p-toluenesulfonamide, which appears to have the formula



and to belong to the class of chlorylamides, the hydrogen of the amide group of which has acid properties.

In accordance with the process, a bath is prepared which consists of 1000 liters of water, usually tap water, into which 30 kilograms of activin have been stirred, the same constituting a solution of about 3% strength. This bath, contained in suitable tanks, such, for example, as clean wood tanks or lead lined tanks, is used for the treatment of the strands, fibers, stalks, and the like, by immersing the same therein, the temperature being preferably maintained at around 60 to 65° C. Satisfactory results are obtained even when such bath temperature is maintained only during the daytime and allowed to drop off during the night if this should be necessary due to plant conditions, but such variation in temperature is not required by the process itself. This treatment at 60 to 65° C. is maintained for about 2 to 4 days, more or less, depending somewhat on the amount of material treated and on the amount of green matter or chlorophyll to be removed therefrom. It is preferred to use the treating materials in such proportion to the treated materials that, as a rule, the activin in the bath will be substantially

exhausted; but where this is not done, it is of course within the scope of my invention to make further use of the available activin for a similar purpose.

After such treatment, the greener materials are given extra baths when this appears to be necessary, as may be determined by inspection of the material treated, such extra baths being a mere duplication of that already referred to, and the number of such baths will depend upon the green or chlorophyll content. As a matter of fact, three baths is practically sufficient for the greenest material, such as palm fibers, under the conditions noted.

The use of the 3% solution above referred to is preferred, although stronger solutions can be used with a consequent decrease in the time of treatment and possibly in the number of baths used, and weaker baths can be used with a consequent increase in time of treatment and possibly in the number of baths used.

Variations in temperature are also permissible, lower temperatures resulting in an increase in the time of treatment; but higher temperatures, while decreasing the time of treatment, are apt to dispel the activin too rapidly and cause a waste thereof, and for this reason we prefer to maintain the bath below 70° C.; and, the range from 60° C. to 65° C. is preferred for reasons of economy and efficiency.

Agitation of the material in the bath is not necessary, nor is washing the material necessary after treatment thereof as above described, and after completion of the treatment above specified to prepare the material for subsequent dyeing or bleaching all that is necessary to do is to remove such material from the bath, whereupon it is ready for bleaching or dyeing, as the case may be, without any substantial decrease of strength due to the treatment with activin.

While the sodium derivative has been specifically referred to and is preferred, it is within the scope of the invention to use other soluble derivatives or salts, that is, compounds in which the acidic hydrogen has been replaced by other bases.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. The process of preparing green vegetable fibers for bleaching or dyeing which comprises treating such fibers with



5 in which R is an alkali metal.

2. The process of preparing green vegetable fibers for bleaching or dyeing which comprises treating such fibers with activin.

10 3. The process of preparing green vegetable fibers for bleaching or dyeing which comprises treating such fibers with a solution of



15 in which R is an alkali metal.

4. The process of preparing green vegetable fibers for bleaching or dyeing which comprises treating such fibers with a solution of activin.

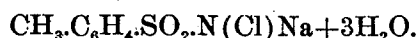
20 5. The process of preparing green vegetable fibers for bleaching or dyeing which comprises treating such fibers with an aqueous solution of



25 in which R is an alkali metal.

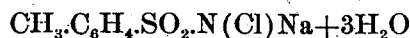
6. The process of preparing green vegetable fibers for bleaching or dyeing which comprises treating such fibers with an
30 aqueous solution of activin.

7. The process of preparing green vegetable fibers for bleaching or dyeing which comprises treating such fibers with a 3% solution in water of



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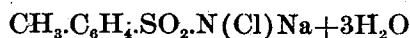
8. The process of preparing green vegetable fibers for bleaching or dyeing which comprises treating such fibers with a solution of



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at 60 to 65° C.

9. The process of preparing green vegetable fibers for bleaching or dyeing which
45 comprises treating such fibers with an aqueous solution of



at 60 to 65° C.

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10. The process of preparing green vegetable fibers for bleaching or dyeing which comprises treating such fibers with a 3% solution in water of



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at 60 to 65° C.

In testimony whereof I hereunto affix my signature.

EDGAR W. GEISLER.