Cl. 252

Published May 25, 1943

Serial No. 416,424

ALIEN PROPERTY CUSTODIAN

PRODUCING A WASHING AGENT AND DETERGENT

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No Drawing. Application filed October 24, 1941

The present invention relates to a method of producing a washing agent and detergent and particularly is concerned with the manufacture of a washing agent and detergent and with this washing agent and detergent itself.

The method according to the invention consists in adding water soluble lignine transformation products, particularly the extraction—and treatment—products respectively (alkali lignine) obtained by the treatment of lignine with aqueous alkali solutions or salt solutions to a washing agent and detergent, for instance a soap in liquid, semi-solid or solid form in the conformation of for instance cakes, flocks or powders which may be free of or contain filling materials, or to other washing agents and detergents which at least partly are composed on an organic basis, particularly such washing agents and detergents which contain fatty acid salts and may contain other substances, for instance salts, oxidyzing means, inorganic substances, as for instance waterglass, whereby preferably the content of the washing agent on fatty acid salts and organic washing agents respectively is reduced.

As is well known, the hitherto used washing agents and detergents have drawbacks, which with washing agents containing relatively small amounts of organic substances only and for instance contain chemicals having a bleaching effect consist in this that the washing and purifying effects are not satisfactory and accompanied by damages inflicted on the fabric, whereas the soaps, for instance the soap powders, possessing good wetting and emulsifying efficiencies, have a washing effect free of objections, have, however, the drawback of forming lime soaps when used in hard water.

The washing agent and detergent according to the present invention which is characterized by a content on water-soluble lignine products, particularly alkali lignine, is free of these drawbacks. An addition of alkali lignine of 20 to 25% to a washing agent and detergent of the above mentioned kind results in an excellent washing effect without harmful action upon the textile material even then if the washing agent contains relatively small amounts of fatty acid salts and this without presenting the drawbacks which are due to the formation of lime soaps.

The water-soluble lignine transformation products, particularly alkali lignine, act as so-called protecting colloids, so that the use of same prevents losses on fatty acids by the formation of lime soaps. The addition of water-soluble lignine transformation products, particularly alkali lignine, to washing agents the content of fatty acids of which is relatively small, amounts, for instance, to 20% only, is of special importance.

According to the invention preferably the portion of fatty acid is reduced as far as possible in the manufacture of a washing agent and detergent. Harmful effects inflicted on the washing action as well as on the wetting and emulsifying efficiency are not to be feared and automatically washing agents of a bleaching character may be used without damaging the textile material, a definite amount of such agents must, of course, not be exceeded.

With particular advantage alkali lignine transformation products are used in accordance with the invention which may be obtained by known methods. For instance, a product resulting from the wood hydrolysis which represents a mixture of various substances and is called lignine may be treated with an aqueous soda lye or a potash lye or other alkaline reacting solutions until all soluble substances are solved. The treatment may be effected in the heat, for instance by boiling, and pressure may be applied. Then the solution is decanted from the non solved residue. The solution contains the alkali lignine. From this solution solid alkali lignine may be obtained by evaporation and/or salting out. The alkali lignine solution itself, eventually after compressing, may be used for the method of the invention.

According to the invention washing agents and detergents may be obtained which are easily and clearly soluble in water up to 30° DH and have an excellent washing effect.

Example 1

5 parts of anhydrous lignine are shaked for a short period of time with 5 parts of a solution of potassium hydrate of 20%, filled up to 250 parts by means of preliminary heated water and boiled for a short period of time. The bottom sediment is filtered off after standing. The alkali lignine is dried, for instance, by evaporation and 25 parts of this alkali lignine are added to 75 parts of a soap scrap product of a fatty acid concentration of 80% to be had on the market.

Example 2

A soap powder of the following concentration: 21.8 parts of soap scraps, 22 parts of sodium carbonate, 15 parts of sodium sulphate (Glauber's salt) is added to 22.5 parts of alkali lignine and adjusted with water to 100%. The alkali lignine was obtained by treatment of the residue, remaining in the production of sugar from wood, with

the same quantity of a concentrated potassium sulphide solution at boiling temperature, filtering off of the insoluble residue, mixing the filtrate with sodium bicarbonate, separating off of the liquid, eventually compressed, and drying. The washing- and detergent-action is good and no harmful effect is exerted upon the textile material.

The treatment of the lignine may also be effected by boiling under pressure with a potash lye of 20%.

Example 3

To 20 parts of an alkyl- or aryl-ester of sulphuric acid and higher molecular fatty acids, 15 parts of sodium carbonate, 8 parts of sodium perborate, 24 parts of an alkali lignine are added which were obtained in the following manner: 15 parts of anhydrous lignine were stirred with 28 parts of ammoniac of 40% for several hours, shortly heated under pressure and cooled after release of the pressure. The solution was salted out with sodium sulphate and the precipitated alkali lignine was used. Moreover, 4 parts of waterglass and 14 parts of sodium sulphate were added and adjusted to 100% with water. The product has an excellent automatic washing effect without local oxygen dissociation and harmful effects upon the washed material.

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