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ALIEN PROPERTY CUSTODIAN

PROCESS OF PRODUCING SULPHUROUS POWDERS

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The invention relates to a process of producing sulphurous powders distinguished by a particular deep action. It is known that powders containing sulphur are excellently suitable for many purposes, for example for cosmetic purposes or also for dermatopathic purposes, as for example for treating comedones, acne, folliculitis. The sulphur powders employed for this purpose, usually contain the sulphur as an admixed constituent in inorganic form, and therefore the action of these powders is limited, since primary sulphur in crystalline or colloidal form cannot penetrate the adipose epiderm.

Other powders containing sulphur are known in which the sulphur is present as an organic water-soluble sulphur compound, but these powders too are not satisfactory, since the water-soluble sulphur compounds are likewise incapable of penetrating the adipose epiderm.

According to the invention, it is proposed to produce a sulphurous powder by incorporating sulphurous conversion products of cholesterines or compounds or substances containing cholesterines, such as wool fat, wool wax, or the like, i. e. fat-soluble sulphur compounds capable of readily penetrating the epiderm, such a powder being distinguished by a particular deep action.

The powder is produced by thoroughly triturating or grinding the usual powder constituents, such as talcum, starch, bolus alba, etc., with the sulphurous conversion products of cholesterines etc. mentioned above, so that the individual particle is provided with an exceedingly thin coating of these sulphur compounds.

Such compounds can be produced by heating cholesterines or mixtures of substances containing cholesterines, such as wool fat or wool wax, with sulphur or substances giving off sulphur, in which it is preferable to employ solvents or diluents, such as alcohol, gasoline, benzene, glycerine, and the like, and to use higher reaction temperatures (200 to 220 degrees Celsius.)

The fat-soluble products, produced in this reaction, which are distinguished by their deep action, and especially distinguished by an approximately 50% higher iodine valency and a particularly pronounced reducing and oxidizing capacity, whose chemical nature could not be ascertained so far, may be termed as particularly valuable, since the especially favourable action of the sulphur is combined with the skin-nourishing properties of the cholesterines.

Now, if powder particles, which may be provided in known manner and by suitable mixing methods with an exceedingly thin fat coating, are mixed with the cholesterine-sulphur compounds by thorough trituration, if necessary in heat, the powder constituents are surrounded by a correspondingly thin coating which, when the powder is applied to the skin, slightly rubbing or massaging, is immediately absorbed by the skin.

As the sulphur compounds mentioned above have a fatty nature, a resorption by the body is not likely, since fatty products are scarcely or not at all capable of mixing with the serous liquid of the lymphatic ducts in the acanthous layer (rete Malpighi). The deep acting organic sulphur, which owing to its properties may be termed as biologically active and which in the present case is communicated to the skin by means of the powder in a particularly fine distribution, after having entered to certain depth of the skin, can therefore only become effective in this place, which ascertainment is of special importance in view of the purpose to be served in the skin by the sulphur.

Example 1

400 g of wool wax containing principally cholesterines are mixed in heat with 100 g of precipitated sulphur. To this are added 300 g of glycerine.

Then, the entire substance is heated on a sand bath to 210 degrees C. while being constantly stirred. The temperature is kept constant for 1/2 hour, whereupon the substance is left to cool while being stirred. The cold substance is taken up with carbon tetrachloride and the solution is filtrated off the not solved or not combined sulphur. The resulting product (yield 420 g) contains 11.7% of sulphur, partly solved and partly combined.

Example 2

6.7 g of isocholesterine are mixed, as stated in example 1, with 2.1 g of sulphur and 40 g of glycerine

and heated and left to cool. When cold, the substance is taken up with ether and the solution is filtered off. After the residue obtained (7.7 g) has dried, there remains a resinous glass-clear solid substance containing 12.4% of sulphur.

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