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3,071,514
CORRECTIVE SHAMPOOS CONTAINING
CADMIUM SULFIDE

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This invention relates to corrective shampoos contain-
ing cadmium sulfide, methods of preparing said shampoos
and their use for the control of pruritis, and non-specific
and seborrheic dermatoses.

An object of this invention is to provide a corrective
shampoo comprising cadmium sulfide in an aqueous me-
dium in association with a detergent foaming base.

Another object of this invention is the provision of a
corrective shampoo comprising an aqueous medium con-
taining cadmium sulfide, silicon dioxide and a detergent.

Still another object of this invention is the provision of
a method for producing a corrective shampoo containing
cadmium sulfide, silicon dioxide and a detergent in an
aqueous medium.

A further object of this invention is the provision of
a method for controlling pruritis, and non-specific and
seborrheic dermatoses by using a corrective shampoo con-
taining cadmium sulfide and a detergent in an aqueous
medium.

In accordance with the present invention, it has been
discovered that aqueous shampoos containing cadmium
sulfide, and a detergent are useful for treating a wide va-
riety of skin abnormalities such as, for example, non-
specific and seborrheic dermatoses in cats and dogs and
dandruff in humans. These beneficial results were entirely
unexpected since cadmium sulfide is an extremely water
insoluble substance. It appears, however, that in spite
of this insolubility, cadmium sulfide when properly
brought into contact with these abnormal skin conditions
will bring about a very desirable corrective effect without
producing undesirable toxic effects. We believe that the
beneficial effects may be due in part at least to the inti-
mate association of cadmium sulfide with silicon dioxide
in the aqueous detergent base, which permits a uniform
contact with the affected skin areas, hair follicles, and
hairs. Another important property is the ease and com-
pleteness with which the cadmium sulfide can be removed
from the treated areas after remaining in contact there-
with for 10 or more minutes by merely rinsing in water.

In producing compositions in accordance with our in-
vention, cadmium sulfide is suspended in an aqueous me-
dium containing a detergent such as, for example, tri-
ethanolamine lauryl sulfate. In a preferred method, the
cadmium sulfide is first intimately mixed with a silicon
dioxide product such as Cab-O-Sil (Cabot Company, Bos-
ton, Massachusetts), ranging in size from about 0.01 to
0.1 of a micron. In addition to these three preferred
basic ingredients, auxiliary substances such as gums, foam-
ers, hair conditioners, and odors may be employed. The
following specific example will serve to illustrate suitable
corrective shampoos and their method of preparation.

2 lbs. 8 oz. of silicon dioxide (Cab-O-Sil) are milled
with 1 lb. 12 oz. of cadmium sulfide in 5 gallons of water.
After a smooth mixture has been obtained, 13 oz. of
sodium alginate are added and again milled until a smooth
mixture is obtained. Then 41 lbs. 12 oz. of 44% tri-
ethanolamine lauryl sulfate solution and 8 lbs. 8 oz. of
diethanolamide of lauric acid are added and thoroughly
mixed. 3 fluid ounces of an odor, Neutroscent (Fritz-
sche Company), or other suitable perfumed liquid and
enough water to make a total of 20 gallons are added.
The final shampoo contains cadmium sulfide 1.0% w/v.
in a detergent base.

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In the foregoing specific example, the particular deter-
gent employed may be replaced by any suitable detergent
such as, for example, alkyl aryl sulfonates, fatty acid
soaps, coconut oil soaps, polyalkylene alkyl phenols, so-
dium alkyl sarcosinates, sodium sulfosuccinic esters and
dodecyl β alanine.

Similarly, the sodium alginate may be replaced by any
suitable gum such as, for example, guar, methyl cellulose,
Veegum (Vanderbilt Co.) and tragacanth.

The cadmium sulfide content of our corrective sham-
poos can be varied as desired. We prefer concentrations
ranging from about 1% to about 2.5%. Cab-O-Sil is a
preferred silicon dioxide product in our formulation, and
the preferred concentrations range from about 1 to about
3%. However, Cab-O-Sil may be replaced by other sili-
con dioxides such as, for example, Ludox (Du Pont Com-
pany) and Santocel (Monsanto Company). The deter-
gent content of our shampoo varies from about 5 to
about 15%; the gum from about 1 to about 2%; the hair
conditioner from about 2.5 to about 10%; and the odor
neutralizer from about 0.01 to about 0.2%. The expres-
sion "aqueous medium" as employed in this specification
and in the claims does not preclude the addition of rea-
sonable quantities of water-miscible, non-toxic liquid ad-
juvants such as, for example, 2 to 10% of the following:
ethyl alcohol, isopropyl alcohol, propylene glycol, mono-
ethyl ether of diethylene glycol or similar substances.

A process for using our shampoo for correcting abnor-
mal skin conditions comprises applying it to an infected
hairy area, allowing it to remain for a period of at least
10 minutes and then rinsing with water to effect removal
of the shampoo ingredients.

We claim:

1. A corrective shampoo composition comprising an
aqueous suspension containing cadmium sulfide 1 to
2.5%, silicon dioxide 1 to 3%, a foaming detergent 5
to 15% and a water dispersible gum 1 to 2%.

2. A process for correcting abnormal skin conditions
which consists in applying a corrective shampoo, com-
prising cadmium sulfide, silicon dioxide and a detergent
in an aqueous medium, to an infected hairy area, allow-
ing said shampoo to remain for a period of at least 10
minutes and rinsing with water to remove said shampoo
ingredients.

3. A process for correcting abnormal skin conditions
which consists in applying a corrective shampoo com-
prising cadmium sulfide and a detergent in an aqueous
medium to an infected hairy area, allowing said shampoo
to remain for a period of at least ten minutes and rinsing
with water to remove said shampoo ingredients.

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