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LIPSTICK REMOVING METHODS

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The present application is a continuation-in-part of my United States patent application Serial Number 855,001, filed November 24, 1959, now abandoned.

This invention relates to the removal of lipstick, and more particularly to the removal of lipstick and lipstick stain both from the lips of the user and from fabrics.

As is well known in the art, lipstick is generally comprised of a base material, which is usually a mixture of waxy materials and fatty substances, and dyes or pigments, the latter of which may be organic dyes which are dissolved in oil or water and/or insoluble lakes or pigments. The coloring matter is uniformly dispersed throughout the wax base by extensive milling. Other materials such as lanolin and perfuming and flavoring agents will generally be added to produce a most desirable product. Almost universally, bromo dyes or eosins are employed for the basic coloring agent.

Numerous cold creams and cleansing lotions are presently available for removing cosmetic preparations from the skin and also for cleansing the pores. These cleansing agents enjoy widespread acceptance and extensive use, but have been generally unsatisfactory for removing lipstick and for removing the residual color imparted to the lips, especially by the newer forms of permanent lipsticks. Generally, such agents fail to remove the lipstick and color completely; and oftentimes, that color which is removed by the cleansing agent tends to stain anything that may come in contact with the now-colored cleansing agent or tissue. Furthermore, the oiliness or greasiness of such agents confines their use to the nocturnal toilette since it is impracticable to employ them at work, at school, or during an evening's entertainment.

The removal of lipstick and the removal of the residual stain on the lips is highly desirable for many obvious reasons, including the difficulty of removing stains on clothing and linens. Dentists and medical practitioners universally object to the presence of lipstick during oral examinations and treatment. From a hygienic standpoint, it is preferable that lipstick be removed prior to use of glassware and other dining utensils. Furthermore, it is most desirable to remove the residual lipstick prior to the application of another coating either of the same color or of a different hue; and this is particularly true with many of the permanent-type lipsticks which physically dye the tissues of the lips. From the standpoint of promoting tissue health, all traces of lipstick and dye should be removed periodically, preferably each night.

Lipstick stain on fabric is one of the most tenacious, particularly when it has had the opportunity to set and the dyes or pigments have penetrated into the fibers. Strong detergents have been used for removing these stains from washable fabrics with varying degrees of success. Also, application of hydrofluoric acid to the fabric stain followed by exposure to steam has been utilized professionally with its obvious disadvantages both from the standpoint of injury to health and to the fabric. Many conventional dry cleaning solvents are effective in removing the bulk of the lipstick mass on the fabric, but have little or no effect upon the residual stain imparted by the dyes.

It is an object of the present invention to provide methods for removing lipstick and lipstick stain both from the lips of the user and from fabrics.

Another object is to provide relatively inexpensive compositions for such lipstick and lipstick stain removers which may be used as impregnants for disposable applicators for removal from the skin and lips, and which will substantially decolorize the lipstick and stain transferred to the applicator.

A further object is to provide relatively inexpensive dry cleaning and spot-removing compositions which will remove lipstick and lipstick stain from fabrics readily and simply.

Other objects and advantages will be readily apparent from the following detailed specification and claims.

It has now been found that the foregoing and related objects can be attained by use of a composition consisting essentially of an aromatically activated diamine salt of an acid selected from the group consisting of the acid salts of phenylenediamines, naphthyl ethylenediamines, and combinations thereof, and a vehicle therefor containing at least one organic solvent or dispersant for the lipstick mass and dye. As will be readily apparent, the organic solvents or dispersants utilized for compositions to be applied to the skin should be nontoxic and non-allergenic; and solvents or dispersants having these characteristics are preferably utilized in the dry cleaning and spot removing compositions.

For the removal of lipstick and lipstick stain from the lips and skin, the composition is preferably utilized by impregnating or saturating a suitable absorbent material which is then rubbed lightly across the lips. The lipstick mass and stain are removed substantially instantaneously, and the lips or skin are preferably blotted thereafter with a dry tissue or the like. It has been found that the stain transferred to the applicator will be decolorized almost instantaneously, depending upon the amount of aromatically activated diamine salt. When the vehicle contains no water, it is necessary to moisten the lips initially, most easily by the tongue. Such preliminary moistening is not necessary when employing a vehicle containing water.

For removal of the lipstick and stain from fabrics, the stained area is preferably saturated with the lipstick-removing composition with a piece of blotting paper or absorbent material behind the fabric. This tends to float out of the fabric the residual lipstick load and tends to loosen the dye which has penetrated or otherwise affixed itself to the fibers. Rubbing with a clean cloth, preferably presaturated in the cleaning composition, then serves to remove the residual stain. For tenacious stains or for a most thorough operation, it is desirable to rinse the stained area with water and repeat the operation with the lipstick removing composition. Depending upon how firmly the lipstick stain is set into the fibers, it may on occasion be necessary to repeat the operation several times to remove the last vestiges.

Any of the acid salts of the naphthyl-substituted ethylenediamines and the phenylenediamines may be utilized in the compositions of the invention. The naphthyl ethylenediamine salts are preferably utilized for both cosmetic and spot-removing applications since they exhibit somewhat greater activity and have a pure white color, whereas the phenylenediamines tend to oxidize to a yellowish color upon exposure to oxygen. Generally for lipstick removing compositions to be utilized on the skin and lips, these salts or combinations thereof preferably comprise 1.0–12.0 percent by weight of the composition and preferably about 3.0–7.0 percent by weight. Lesser amounts can be employed with appreciably reduced effectiveness, and greater amounts present problems from the standpoint of dissolving or suspending the salt in the fluid vehicle and also from the standpoint of cost.

For the spot removing compositions to be utilized on fabric, the aromatically activated diamine salts have been found effective in amounts comprising as little as 0.02 percent by weight, and amounts in excess of 5.0 percent by

weight are not found to produce any appreciable increase in activity. Preferably, the salts are used singly in concentrations of 0.5–5.0 percent by weight and are preferably used in combination in amounts on the order of 0.5–2.0 percent by weight.

Although any of the acid salts of the naphthyl ethylenediamines and phenylenediamines will produce the desired decolorizing action upon the lipstick stain, it has been found that salts having a pH of 1.0–4.0 are most effective, and those having a pH of 1.5–3.5 are preferred.

Exemplary of the various aromatically activated diamine salts are N-(1-naphthyl)-ethylenediamine dihydrochloride, N-(1-naphthyl) - ethylenediamine dicitrate, N - (1 - naphthyl)-ethylenediamine diacetate; o-phenylenediamine hydrochloride, o-phenylenediamine citrate, o-phenylenediamine acetate; 4-chloro-o-phenylenediamine hydrochloride, 4-chloro-o-phenylenediamine citrate, 4 - chloro - o-phenylenediamine acetate; and N,N' - di - 2 - naphthyl - p-phenylenediamine hydrochloride, N,N'-di-2-naphthyl-p-phenylenediamine citrate, and N,N'-di-2-naphthyl-p-phenylenediamine acetate.

For dry cleaning compositions, it has been found that the addition of a small amount of hydrochloric acid apparently catalyzes the activity of the diamine salt, as little as 0.02 percent by weight producing a very marked increase in activity of the composition. When utilizing such a hydrochloric acid catalyst, the diamine salt concentration may be reduced, particularly when the naphthyl ethylenediamines and phenylenediamines are contained in that mixture. For example, a highly effective composition is one containing 0.025–0.5 percent by weight hydrochloric acid, 0.025–1.0 percent by weight naphthyl ethylenediamine dihydrochloride and 0.025–1.0 percent by weight o-phenylenediamine hydrochloride.

The term "vehicle," as used herein, refers to a carrier for bringing the aromatically activated diamine salt into effective contact with the lipstick stain and for lifting the lipstick mass and stain from the treated surface. The carrier may be a solvent or dispersant for the diamine salt and contains at least one organic solvent or dispersant for the lipstick mass and dye. It includes carriers which are liquid and semi-liquid at room temperature, that is 60–95° F.; and in the case of compositions designed for removal of lipstick and stain from the skin or lips, it also includes solid gels. Depending upon the particular use of the composition, it may be classed generally as a solution, an emulsion, suspension, cream, paste, ointment or solid gel lipstick-type mass. For removal of lipstick and stain from fabrics, however, the composition should be sufficiently fluid at room temperature to effect flotation of the lipstick load and dye out from the fibers of the fabric and to insure saturation and sufficient penetration of the solvent for the lipstick and stain into the fibers of the fabric with commensurate adequate penetration of the aromatically activated diamine salt so as to effect the desired stain removal from the fibers.

At least one component of the vehicle must be an organic solvent or dispersant for the lipstick mass and dye in order to effect the necessary lifting of the dye and lipstick mass from the treated surface into contact with the diamine salt. For cosmetic purposes, it is also necessary that the vehicle have the property of solubilizing dispersing or dissolving the waxy and oily constituents of the lipstick. Although the waxy materials in the lipstick mass are insoluble in many organic solvents, as well as in water, slight rubbing of the lipstick smear with various organic solvents will physically remove or lift the waxy constituents of the lipstick mass from the skin. A great many organic solvents or dispersant for the lipstick stain and dye will also have the property of solubilizing or dissolving the waxy and oily constituents. As will readily be appreciated, highly effective fluid vehicles can be provided by mixtures of solvents or dispersant which are either miscible or emulsifiable.

As will be readily apparent to those skilled in the art, various organic solvents may be employed in accordance with the present invention, either singly or in combination, depending upon the particular use of the product.

COSMETIC APPLICATION

For cosmetic applications wherein the composition is to be utilized for the removal of lipstick stain from the skin or lips, alcohols, both monohydric and polyhydric, fatty acids, and the alkali metal salts and alkyl esters thereof, inorganic acid esters of the higher alcohols and their alkali metal salts, mineral and vegetable oils, Carbitols and Cellosolves (products of Union Carbide Chemicals Company), non-ionic detergents such as the Tweens and Spans (products of Atlas Chemical Company) alkalolamines, alkalolamides, gums and waxes. Generally it is preferable to utilize a liquid or semi-liquid vehicle for optimum solvent action on the residual lipstick mass. However, vehicles containing the color-removing agent and one or more organic solvents for the lipstick mass may be molded into solid gel stick form for use as lipstick-type applicators; it is only necessary that the vehicle carry effective amounts of the color-removing agent into contact with the lipstick stain and remove interfering particles of the lipstick mass.

Although aqueous vehicles containing at least organic solvent or dispersant for the lipstick may be utilized for cosmetic applications, it is often preferable to employ a non-aqueous vehicle, particularly in utilizing the naphthyl ethylenediamine salts. As will be readily apparent, the water utilized in the preparation of aqueous vehicles is preferably deionized or distilled to reduce interference from contaminant ions.

Of the various organic solvents or dispersants, the alkyl esters of the fatty acids and the higher molecular weight alcohols have proven highly effective both alone, in combination with each other, and in combination with other organic solvents and water. Although the Carbitols and Cellosolves (products of Union Carbide Chemicals Company) may be irritating to the skin in large percentages, small amounts of these solvents, generally less than 3.0–5.0 percent by weight, in combination with other organic solvents impart excellent solubilizing properties. Similarly, small amounts of the more volatile lower molecular weight alcohols such as ethyl and propyl are useful for their thinning and solubilizing properties.

Of the fatty acids and their derivatives, the alkyl esters are preferred although the alkali metal soaps and the fatty acids per se may also be utilized. Exemplary of this class are isopropyl palmitate, isopropyl myristate, triethanolamine stearate, sodium stearate, lauric acid, and stearic acid.

Of the alcohols, the higher molecular weight monohydric alcohols (C_8–C_{16}), the gycols and the polymeric alcohols are satisfactorily employed. Exemplary of those alcohols utilized for this invention are dodecyl alcohol, oleyl alcohol, cetyl alcohol, propylene glycol, and the polyethylene glycols (200–6000).

The inorganic acid esters of the higher molecular weight alcohols, the alkali metal salts of the sulfonic acid esters of the C_8–C_{16} alcohols are highly effective in aqueous vehicles. In particular, dodecyl sodium sulfonate and oleyl sodium sulfonate have been particularly satisfactory.

Of the other solvents or dispersants, beeswax, paraffin, Lauraline Wax (Croda, Ltd.) and Polywax (Croda, Ltd.) have high solubilizing properties for the lipstick dyes. Lanolin, lanolin alcohol, spermaceti oil, almond oil and other vegetable and mineral oils are particularly soothing to the skin in addition to their solvent properties. The Tweens and Spans (Atlas Chemical Company) and the alkalolamines and alkalolamides are also useful in the preparation of satisfactory vehicles, as well as the various gums such as acacia and tragacanth.

As will be understood, the mixtures of several classes

of organic solvents or dispersants with other agents are most desirably employed to obtain the optimum properties of each. Exemplary of various vehicles are the following compositions:

Ointment:

Polyethylene Glycol 200 [1]	ml	65
Carbowax 4000 [1]	grams	25

Ointment:

Lauryl alcohol	ml	37.5
Oleyl alcohol	ml	37.5
Carbowax 4000 [1]	grams	15.0

Emulsion:

Oleyl alcohol	ml	10
Isopropyl palmitate	ml	15
Span 83 (Arlocel "C")	ml	10
Tween 80 [2]	ml	10
Water	ml	55

Emulsion:

Lauryl alcohol	ml	10
Polyethylene Glycol 400 [1]	ml	12.5
Span 83 (Arlocel "C") [2]	ml	10
Tween 80 [2]	ml	10
Water	ml	50

Cream:

Lanolin alcohol	grams	2.5
Oleyl alcohol	ml	1
Beeswax	grams	23
Anhydrous lanolin	do	10
Water	ml	60

Solution:

Tragacanth gum	grams	0.5
Dodecyl sodium sulphate	do	2
Water	ml	100

Suspension:

Oleyl alcohol	ml	50
Lauryl alcohol	ml	50

Lipstick:

Polyethylene glycol 200 [1]	ml	30
Carbowax 4000 [1]	grams	60

Lipstick:

Lauryl alcohol	ml	10
Isopropyl palmitate	ml	30
Beeswax	ml	37
Lauraline Wax [3]	grams	15

[1] Product of Carbide and Carbon Chemicals Corporation.
[2] Products of Atlas Chemical Company.
[3] Product of Croda, Ltd.

The color removing agent may be dissolved or suspended in the vehicle. Generally, it is preferable to dissolve or admix the agent in a more liquid solvent or dispersants and then admix therewith the balance of the components. When the viscous and semi-solid agents are employed, it is generally preferable to warm the mixture sufficiently to insure proper admixture.

Additionally, for optimum utilization of the color-removing agent, it is preferable that the agent be thoroughly pulverized. Similarly, after the agent has been admixed with the vehicle, the mixture is desirably filtered to remove excess color-removing agent.

In addition to the foregoing components, other chemical agents may be added to the composition for imparting additional desirable charcteristics or modifying its properties. For example, it is often desirable to employ flavoring and/or perfuming agents to mask the odor and/or taste of the color-removing agent and/or the fluid vehicle. The use of such additives is, of course, well-known to cosmetic chemists and many of the flavoring and perfuming agents commonly used are suitable, and generally may be used in amounts of about 0.25 to 5.0 percent by weight of the composition. Exemplary of those agents which may generally be employed are "Jasmin V–5," "Jasmin 23" and "Rose 1028," all products of the Chem Arom Company of New York, New York, and "Bouquet Special 652" and "Bouquet Special 801," products of the Ising Corporation, New York, New York. Sucaryl, a product of Abbott Laboratories, North Chicago, Illinois, may be conveniently employed as a flavoring agent.

Of the various lipstick removing compositions in accordance with this invention the naphthyl ethylenediamines in non-aqueous vehicles are preferred. When using these compositions, the lips should be moistened initially, most conveniently with the tongue, then rubbed gently with the composition, blotted with a dry tissue, and the process preferably repeated for optimum results. The entire operation takes only a matter of about five to fifteen seconds. When employing the naphthyl ethylenediamines in a water-containing vehicle, no preliminary moistening is necessary; similarly, no preliminary moistening is necessary for the other color-removing agents.

Although other absorbent materials may be utilized such as sponges and cotton wadding, it is preferable to utilize absorbent fabric-like materials for the applicator. The term "fabric-like material," as used herein, refers to cloth or tissue of high absorbency and porosity, and includes material comprised of natural fibers such as cotton and cellulose, and synthetic fibers such as rayon, and combinations thereof.

A preferred fabric-like material is an air-laid cotton fabric of about 8 mils in thickness, manufactured by the Chicopee Manufacturing Corporation (Spec. 650–1968), which is folded six to eight times to provide a pad about 40–50 mils in thickness. This pad when saturated retains large volumes of lipstick-removing composition, and the removed wax and other lipstick ingredients disperse readily throughout the body of the pad.

The lipstick-removing compositions of the present invention may be prepared in liquid or semi-liquid form for packaging in jars or other suitable containers for dressing table use. The composition may be applied to the lips by the fingers or by impregnating or saturating the surface of suitable applicators such as cotton sponges, paper tissues, or pads specifically for this purpose. As stated previously, the lipstick-removing compositions may be prepared in solid gel, stick-type applicators for convenient transport in the purse.

In still another form of convenient packaging, the composition is used to saturate pads of suitable fabric-like material for use as applicators.

Most conveniently, the composition is then used to impregnate and saturate pads of suitable fabric-like material for use as applicators. These saturated pads may then be packaged in convenient moisture-proof wrappers, such as metallic foil or synthetic films, to provide handy sanitary units for transport in the car or purse, or for distribution by dentists or other oral practitioners, restaurants, dress shops, cosmeticians, etc.

In utilizing the composition, although blotting with the impregnated applicator will normally remove most of the lipstick and stain, it is preferable to lightly rub the applicator across the lips two to six times to insure penetration of the composition into the lip tissue, and this gentle rubbing is particularly necessary to remove the visible lipstick and stain provided by some of the newer permanent lipsticks. It has been found that this gentle rubbing will circulate the lipstick-removing composition in the pad and thus bring fresh composition into contact as well as disperse the wax particles of the lipstick mass which have been removed.

As is well known to those skilled in the art, the primary coloring agents utilized commercially in the various lipsticks are of the bromoeosin family. In testing compositions in accordance with the present invention, the various dyes and lipsticks may be tested in vitro as well as in vivo on the lips or skin, the results obtained being generally comparable. Simple in vitro tests are performed by add-

ing the dye or pigment to the composition, or by making a smear of the lipstick on a glass petri dish and adding the composition thereto. In vivo, the lipstick and color-removing action is most readily observed by making a smear of the lipstick on the palm of the hand about ½ inch wide and 1½ inches long. The standard experimental applicator was the above-described Chicopee Manufacturing Corporation fabric in a 6-ply pad, 2 inches x 1 inch. In this manner, numerous commercial lipsticks have been successfully tested.

DRY CLEANING OR SPOT REMOVING COMPOSITION

As will be readily apparent, dry cleaning or spot-removing compositions should utilize fluid vehicles which are highly fluid at room temperature and preferably comprised of volatile components which will readily evaporate from the fabric after treatment. In some instances, the use of less volatile components may be desirable, such as the polyethylene glycols and soaps, with the treated area of the fabric thereafter being rinsed.

Among the many organic solvents or dispersants which have proven highly effective in dry cleaning and spot-removing applications are acetone, dioxane, the lower molecular weight alcohols, carbon tetrachloride, the lower molecular weight alkanes, various halogenated hydrocarbons, Carbitols (products of Union Carbide Chemicals Company), glycols, alkanolamines, fatty acids, fatty acid esters, higher molecular weight alcohols and polymeric alcohols. Acetone, although a highly effective solvent for use in these applications, has the disadvantage of attacking acetate and other synthetic fibers, but dioxane is not subject to the same disadvantages. The preferred solvents are the lower molecular weight alcohols in which the diamine salts are readily soluble and which also act as highly effective solubilizing agents for the lipstick stain so as to insure complete penetration and contact. Because of the poor solubility of the diamine salts in many of the organic solvents or dispersants, it is often desirable to initially dissolve the salt in ethyl and/or methyl alcohol and to then incorporate this solution into the primary component of the fluid vehicle.

For dry cleaning purposes, water in the fluid vehicle is undesirable, although in some instances it is possible to prepare an emulsion containing a suitable organic solvent or dispersant. For example, the diamine salts of the present invention have been initially dissolved in alcohol and then admixed with an aqueous emulsion sold by Renuzit Home Products Company as Renuzit Spot Remover.

Because of the problems in transporting highly volatile compositions of low flash point, it will be generally desirable to employ a solvent or dispersant or mixture of solvents and/or dispersants having a suitably high flash point, such as provided by mixtures of higher weight alcohols or glycols with thinning agents comprising more volatile solvents such as the lower molecular weight alcohols.

A particularly effective mixture is one containing 2.0 percent by weight of a naphthyl ethylenediamine salt in 80 percent by volume propylene glycol and 20 percent by volume ethyl alcohol.

Various combinations of solvents or dispersants can readily be prepared by selecting or utilizing a solvent for the diamine salt and then forming either an emulsion of miscible mixture with other organic solvents or dispersants in which the diamine salt would not otherwise be effective. This mode of utilization has been particularly useful for preparations containing large percentages of hydrocarbons such as are customarily employed in dry cleaning or spot-removing compositions.

More particularly illustrative of the efficacy of the present invention are the following examples wherein compositions made in accordance with the present invention were utilized to remove lipstick and decolorize the stain.

Example 1

Seven grams of finely pulverized N-(1-naphthyl) ethylenediamine dihydrochloride were admixed with 65 cc. of polyethylene glycol 200 until suspended and then were further admixed with 25 grams of Carbowax 4000 (Carbide and Carbon Chemicals Corporation) while heating. The mixture was stirred as it cooled to form an ointment.

Smears of the following lipsticks were made on the palm of the hand: Coty Vibrant, Ruby Red; Hazel Bishop, Firepower; Revlon Love That Red, Pink Lightning; Max Factor Blazing Ruby; Elizabeth Arden April May.

The foregoing composition was utilized to saturate pads of cotton, Kleenex and cotton squares to provide applicators. The smears were moistened with water, rubbed two–six times with the impregnated applicator, blotted with a dry tissue and remoistened, rubbed again with the applicator and blotted; the entire process taking less than about ten seconds. In all instances the lipstick and stain were substantially completely removed and decolorized, and additionally that stain which was transferred to the applicator was substantially decolorized.

Example 2

Ten grams of finely pulverized N-(1-naphthyl) ethylenediamine dicitrate were admixed with 100 cc. of polyethylene glycol 200 to provide a saturated solution which was then filtered. The saturated solution was then utilized to impregnate applicators made of Kleenex and the method described in Example 1 was followed to remove the lipstick and stain produced by the same lipsticks.

Example 3

Seven grams of finely pulverized N-(1-naphthyl) ethylenediamine dihydrochloride were thoroughly admixed with 30 cc. polyethylene glycol 200 and then admixed with 60 grams of Carbowax 4000 while heating to melt the Carbowax and stirring. The resultant admixture was cast and cooled into a lipstick-type form.

Smears of the lipsticks enumerated in Example 1 were again made on the palm of the hand. These smears were moistened, rubbed with the stick-type applicator so produced, blotted with a tissue and the process repeated. The lipstick and stain were substantially removed and decolorized.

Example 4

Three grams of o-phenylenediamine hydrochloride were admixed with 100 cc. distilled water and 2 grams dodecyl sodium sulphate to provide a solution of the color-removing agent. Pads of air-laid cotton material (Chicopee Manufacturing Corporation) were saturated with the foregoing solution and then rubbed 2 to 6 times across smears of the following lipsticks made on the palm of the hand: Helena Rubenstein Cherry, Red; Revlon Orange Sherbet; Emily Rogers Coral; Elizabeth Arden April May. The smears and stain were substantially instantaneously removed.

Example 5

One gram of naphthyl ethylenediamine dihydrochloride was dissolved in 100 milliliters of 95 percent ethyl alcohol. The pH of this solution was found to be about 2.5. A piece of white cotton fabric was coated with the Coty 24 lipstick and allowed to set for a period of about one-half hour.

The lipstick-stained portion of the cotton fabric was thoroughly saturated with the solution, and a piece of clean absorbent material was rubbed briskly across the stain for a period of less than one minute. Upon inspection, it was found that substantially all of the lipstick stain had been removed.

The area which still exhibited a faint color was rinsed with water and the above procedure repeated. Thereafter, upon inspection, no trace of color could be observed.

This process was subsequently repeated on similar

squares of wool, cotton flannel, silk, linen and rayon with equal efficacy.

Example 6

One gram of naphthyl ethylenediamine dicitrate was dissolved in 100 milliliters of a solution consisting of 50 percent methyl alcohol and 50 percent ethyl alcohol. A piece of white cotton fabric bearing a loading of Coty 24 lipstick prepared as above was treated in accordance with Example 5. Upon inspection, no evidence of stain could be observed.

Example 7

One gram of o-phenylenediamine hydrochloride was dissolved in 100 milliliters of a mixture of dioxane and Renuzit (a petroleum hydrocarbon fraction sold by the Renuzit Home Products Company of Philadelphia Pennsylvania) in 50/50 percent volume admixture.

Specimens of wool, silk and linen bearing loadings of Coty 24 lipstick as above were treated with the composition by saturation of the stained area and brisk rubbing with a piece of clean absorbent cotton fabric. The stain was readily removed in a single operation.

Samples of cotton fabric bearing the same loading were also treated with the composition, but after brisk rubbing for one minute, a faint stain was still evident. This stain was rinsed with water and the process repeated, after which inspection evidenced no trace of the stain.

A composition prepared similarly but utilizing acetone in place of dioxane evidenced greatly increased effectiveness in removal of the stain from cotton fabrics.

Example 8

A solution of 1 gram of N,N'-di-2-naphthyl-p-phenylenediamine hydrochloride in 100 milliliters of acetone was prepared, to which was thereafter added six drops of concentrated hydrochloric acid. This solution was utilized to remove lipstick loadings from cotton, wool, and linen fabrics prepared as above and compared in effectiveness with the same composition not having the hydrochloric acid additive. In all instances, the stain was substantially completely removed within about forty seconds of saturation, but the solution containing the hydrochloric acid appeared to act about twice as quickly as the other solution.

Example 9

A solution was prepared containing 1 gram naphthyl ethylenediamine dihydrochloride and 1 gram o-phenylenediamine hydrochloride in 100 milliliters of a 50/50 mixture of polyethylene glycol 400 and 95 percent ethyl alcohol.

This mixture when utilized for the treatment of lipstick-loaded cotton, wool, rayon, silk and linen fabrics removed the lipstick load and stain within a period of one minute of saturation and brisk rubbing with a clean absorbent material.

This solution was also utilized for treatment of these fabrics bearing loadings of numerous other commercial lipsticks with equal if not greatly superior efficacy.

Example 10

Two grams of naphthyl ethylenediamine diacetate were dissolved in a mixture of 25 milliliters of ethyl alcohol, 25 milliliters methyl alcohol and 50 milliliters carbon tetrachloride. This mixture was utilized to treat wool, cotton, silk and rayon fabrics prepared with lipstick loadings as above. In each instance, the lipstick was removed readily and completely within a period of less than one minute.

I claim:

1. The method for the removal of lipstick and lipstick stain from fabrics and skin comprising circulating through a lipstick stain on a surface until the stain is substantially completely removed therefrom a composition consisting essentially of a diamine salt of an acid selected from the group consisting of the salts of naphthyl ethylenediamines, phenylene diamines and mixtures thereof, and a vehicle selected from the group consisting of solvents and dispersants for said diamine salt to bring it into effective contact with the lipstick stain and to lift the dye and lipstick mass from the treated surface into contact with the diamine salt, said diamine salt constituting 0.02 to 12.0 percent by weight of said composition and having a pH of about 1.0 to 4.0.

2. The method in accordance with claim 1 wherein said circulation of the composition is accomplished by impregnating an applicator therewith and rubbing the impregnated applicator upon the stain to circulate the composition therethrough.

3. The method in accordance with claim 1 wherein said diamine is a naphthyl ethylenediamine.

4. In the method for the removal of lipstick from the lips of the user, the steps comprising moistening the lips with water; and gently rubbing on the lips to remove the lipstick and stain therefrom a composition consisting essentially of a diamine salt of an acid selected from the group consisting of the salts of naphthyl ethylenediamines, phenylene diamines and mixtures thereof, and a non-aqueous and non-toxic vehicle selected from the group consisting of solvents and dispersants for said diamine salt to bring it into effective contact with the lipstick stain and to lift the dye and lipstick mass from the treated surface into contact with the diamine salt, said diamine salt constituting 0.02 to 12.0 percent by weight of said composition and having a pH of about 1.0 to 4.0.

5. The method for removing lipstick and lipstick stain from fabric comprising saturating a fabric portion having lipstick stain thereon with a composition consisting essentially of a diamine salt of an acid selected from the group consisting of the salts of naphthyl ethylenediamines, phenylene diamines and mixtures thereof, and a vehicle selected from the group consisting of solvents and dispersants for said diamine salt to bring it into effective contact with the lipstick stain and to lift the dye and lipstick mass from the treated surface into contact with the diamine salt, said diamine salt constituting 0.02 to 12.0 percent by weight of said composition and having a pH of about 1.0 to 4.0; and gently rubbing a clean, absorbent fabric over the saturated stained area to remove the lipstick and stain.

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