A FEW GOOD TOILET PREPARATIONS.*

BY H. S. GROAT.

CASEIN MASSAGE CREAMS.

The most difficult to make and the least attempted of all toilet preparations are, without a doubt, casein massage creams. No single preparation meets with such universal use among the members of the fairer sex, as well as among men, as do these, and, strikingly enough, the most widely sold proprietary toilet preparation in the world is a certain commercial article of this class.

First, for a basis, let us consider for a moment the nature of casein. Milk, we are told, contains three proteid substances: casein, albumin, and globulin. The latter two exist in small quantities and are unaffected by the usual chemical precipitants of casein, but are coagulated by heat. Casein is precipitated by dilute acids, rennet, alum, magnesium sulphate, etc. It supposedly exists in milk in combination with phosphates, presumably the alkaline phosphates. The addition of acids breaks up this combination and precipitates the casein. The precipitation of casein by rennet is due to the presence in milk of calcium salts, and therefore is dependent upon the calcium.

In making casein creams, skimmed milk is recommended, because with pure milk some of the fatty substances may be brought down as part of the precipitate; especially is this true when rennet is used as the precipitating agent. A rancid product is the result when any of the fatty substances are precipitated with the casein, as butyric acid is formed by their oxidation with liberation of ammonia gas, hence the addition of boric acid to the finished product for the double purpose of both antiseptic and preservative.

FORMULA I.

Skimmed milk	1750.0
Magnesium sulphate	175.0
Alum	17.5

To each 100 grammes of the casein add

Boric acid	20.0
Cacao butter	10.0
Carmine	q. s.
Essence of bitter almond	q. s.

Heat the skimmed milk to 120° F., add the magnesium sulphate previously dissolved in hot water, and set the combined solutions aside for an hour. Heat to 135° F. and add the alum previously dissolved in water, and continue heating until the temperature reaches 145° F. Strain through cheese-cloth, wash the casein thoroughly in several waters, and then press dry. Tint the moist casein with carmine, thoroughly incorporate the boric acid and then add the melted cacao butter, then lastly the perfume.

This method of precipitating the casein is known as the alum-magnesium method. In the next formula the dilute acid method is used.

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FORMULA II.

Skimmed milk	3850
Hydrochloric acid	30
Boric acid	30
Oil bitter almonds	3
Oil rose geranium	2
Oil sweet almonds	15
Solution carmine	sufficient

Add one gallon of boiling water to the milk, which should raise the temperature of the resulting solution to about 80° F. Mix the hydrochloric acid with a pint of water and add very slowly to the milk solution, stirring constantly to insure complete coagulation and precipitation of the casein, which by this method is caused to separate out in a much finer divided condition than by the alum-magnesium method. After an hour stir the mixture thoroughly in order to break up any and all of the little masses that may have formed, strain through cheese-cloth, and wash copiously in order to eliminate the hydrochloric acid from being present in the finished product. Allow the casein to drain in a cheese-cloth bag for thirty-six hours. Reduce the casein, which should have contracted into a dry, hard lump, to a fine powder, moisten with an ounce of alcohol, add the boric acid, the oil of sweet almonds, and incorporate thoroughly. Lastly add the oil of rose geranium, the oil of bitter almonds, and the carmine solution. It may be necessary to add a little water to make the whole mass a paste of the proper consistency.

In the manufacture of casein creams for the market care must be taken, first, not to tint the product too deep a color, as its sale is likely to be greatly hampered for this one reason; second, to put the product up in jars of tightly-fitting covers. Screw-capped jars have been found to be entirely unsatisfactory, due to the fact that casein creams give off moisture very readily and have a tendency to harden. This is decidedly an undesirable feature, which, if not properly guarded against, will greatly hinder the commercial success of the product, no matter how excellent or how extensively advertised.

COLD CREAMS.

Next to casein massage creams, cold creams are, perhaps, without a doubt the most difficult to make of all toilet preparations, as well as the least attempted by the average retail pharmacist. He is generally satisfied to sell a preparation of an eastern manufacture, whether it bears his own label or not, so long as it yields a better profit than the regularly-advertised proprietaries of this class.

A mixture of hard wax and an oil forms the basis of cold creams, sometimes vegetable and other times mineral. White wax, yellow wax, spermaceti, or hard paraffin, with petrolatum, petroleum oil, almond oil, or castor oil, form the common bases for cold cream manufacture.

Both the color and the softness of a cold cream are very important factors, especially as the commercial success of preparations of this character depends a great deal upon their reception by the fairer sex.

The white color so necessary for cold creams is generally obtained by the addition of borax at the proper stage in the manufacturing, the amount varying according to the different bases used in various formulas, more being used to gain the desired whiteness when yellow wax is used in place of paraffin or white wax for the hard base. The softness and fluffiness of the cold cream depend, first, upon the proper mixing of the oily solution or mass and the aqueous solution of the borax; second, upon the proper beating of the resultant mass into a cream when the mixture begins to harden.

FORMULA I.

Petrolatum	175.0
Liquid petrolatum	10.5
Paraffin	10.5
White wax	48.0
Sodium biborate	3.0
Glycerin	3.0
Water	120.0
Perfume	sufficient

Melt the white wax on a water-bath, add the paraffin, and when it is completely melted add the petrolatum and the liquid petrolatum. Dissolve the borax in the water, add the glycerin and heat the solution to 120° F., and add it gradually to the oil solution, which should be transferred to a Wedgwood mortar, care being taken that the temperatures of both the oil and aqueous solutions are the same at the time of mixing. When the mass begins to congeal, whip into a fluffy, white cream by the aid of a Dover egg-beater. Add 5 to 10 Cc. of perfume and beat in well after the cream has cooled.

In this formula we have white wax and paraffin for the hard base, and petrolatum and liquid petrolatum for the soft or liquid base. The borax is the whitening agent, water the diluent, and glycerin the modifying agent for the borax, converting part of it to boric acid—a preservative.

As a purely epidermatic agent—acting only on the surface of the skin—this formula is very good, though a cold cream, to meet with commercial success, must be of an endermatic nature—penetrating into, but not through, the skin—rather than of an epidermatic nature, as the usual object of applying a preparation of this class is to soften and whiten the skin by absorption into, but not through it, rather than by application of a simply surface-protecting emollient. Nevertheless, this preparation met with very popular favor, even if it is not theoretically perfect.

A first-class cold cream, very suitable for facial massage, is made from:

FORMULA II.

Expressed oil of almonds	77.0
Lanolin	15.0
Paraffin	18.0
White wax	18.0
Sodium biborate	1.5
Solution formaldehyde	0.2
Solution hydrogen dioxide	1.5
Oil rose geranium	0.2
Oil of rose	0.4
Water	27.0

Melt the wax and paraffin on a water-bath, and add the lanolin and later the almond oil. Dissolve the borax in the water and heat to boiling, add to it the formaldehyde and the hydrogen peroxide, and pour the aqueous solution slowly into the hot oil solution, both being at practically the same temperature at the time of mixing. Beat into a cream with an egg-beater, incorporating the perfuming oils before the mass hardens.

The use of almond oil as the liquid base is a decided advantage, as it is of a purely endermatic nature—that characteristic so greatly desired in cold creams. This property can also be augmented by the substitution of petrolatum for the lanolin, as the latter is diadermatic—passing through the skin to be absorbed into the system—instead of endermatic in its nature.

This particular cream, being a peroxide cream, possesses mild bleaching properties(?), which adds to its popularity. The formalin is added to increase antiseptic properties, though perhaps, on account of its presence being disliked by some, it might be satisfactorily replaced by the substitution of a like quantity of hydrogen peroxide.

FORMULA III.—*Non-greasy Skin Cream.*

Stearic acid	15.0
Cacao butter	2.5
Sodium carbonate	10.0
Sodium biborate	2.5
Glycerin	12.5
Water	200.0
Mucilage of tragacanth	50.0

Place all the ingredients in a porcelain dish on a water-bath and heat gradually until effervescence ceases. Remove the mixture from the heat, and when it begins to harden add the perfume—10 Cc. of quadruple extract dissolved in a like amount of alcohol—and mix well. Now heat until melted, and beat the preparation vigorously after the heat is removed, and it becomes fluffy and creamy.

FORMULA IV.—*Non-greasy Complexion Cream.*

Stearic acid	60
Glycerin	8
Sodium carbonate	8
Water	240
Witch-hazel water	300

Heat the water in a suitable vessel on a water-bath, add first the sodium carbonate, next the glycerin, and then the stearic acid. Continue heating until effervescence has entirely ceased. Finally add the witch-hazel and remove from the fire. Beat into a cream as the mixture cools and thickens.

TOILET LOTIONS.

In considering formulas for this class of preparations, we will treat of those of a tragacanth base first, as they are undoubtedly the most popular and most universally used. Of the different formulas considered, the following one yields the best all-round general toilet cream for both ladies' and gentlemen's use. It is favored by the ladies because it is not too sticky and is absorbed readily into the skin; gloves can be worn immediately after its application to the hands. Gentlemen like it very much, as it is an excellent after-shaving cream, in addition to its other toilet properties.

FORMULA I.

Tragacanth	3.0
Water	350.0
Glycerin	9.0
Alcohol	12.0
Menthol	0.5
Perfume	sufficient

Macerate the tragacanth in water for several hours, then strain. To this mucilage add the glycerin and then the menthol and perfuming agent dissolved in the alcohol. Mix. If too thick, dilute with 25 percent alcohol.

A very fine, non-sticky, disappearing face lotion is made from the following formula, recommended by Mr. Hiss, given on page 641 of vol. 51, Proceedings of the American Pharmaceutical Association:

FORMULA II.—*Face Lotion "Hiss."*

Tragacanth (pieces)	5
Boric acid	16
Water	475
Glycerin	80
Alcohol	80
Perfume	sufficient

Dissolve the boric acid in the water by the aid of heat, and to this hot solution add the tragacanth in small pieces; set aside and stir occasionally until the gum is thoroughly and completely softened. Then add the glycerin and strain the mixture forcibly through cheese-cloth and pass enough water through the cloth to make the liquid measure 700 Cc. Shake well and add the alcohol, in which is dissolved the perfuming agent. This is a first-class preparation in every way, and the only improvement that the writer can suggest is the addition of menthol, which in my experience made the preparation "delightfully popular," as the young ladies termed it.

Recently, toilet preparations containing magnesium sulphate enjoyed considerable popularity for a while, due, perhaps, to the large sale, a few years ago, of an extensively advertised "skin food," which upon examination proved to be nothing but crystallized Epsom salts. Of the several formulas experimented with, the following modified one proved the most popular:

FORMULA III.

Magnesium sulphate	120
Tragacanth, powdered	6
Glycerin	90
Heliotrope perfume	30
Water	sufficient, to 480

Triturate the tragacanth and the glycerin to a smooth paste in a mortar with 150 Cc. of water, then add the magnesium sulphate dissolved in 240 Cc. of water. Add the balance of the water, and finally strain through fine cheese-cloth.

The saline and cooling effect of the Epsom salts is desired by a number of people, especially those afflicted with freckles, as the magnesium salt is credited with a bleaching effect.

A choice preparation made from the double base of tragacanth and quince seed is:

FORMULA IV.

Tragacanth	0.4
Quince seed	3.0
Sodium borate	1.0
Boric acid	1.5
Alcohol	15.0
Boiling water	100.0
Glycerin	15.0
Sodium benzoate	0.5
Essence of violet	10.0
Solution of carmine	sufficient
Water	sufficient, to 200.0

Macerate the tragacanth in 50 Cc. of water until it dissolves or becomes a homogeneous mixture. Steep the quince seed in the boiling water for four hours, agitating frequently; then strain carefully through muslin and mix with the tragacanth mucilage. Dissolve the borax, sodium benzoate, and the boric acid in the remainder of the hot water. Mix the perfume, alcohol, and glycerin and add, portion by portion, to the combined tragacanth and quince-seed mucilage, shaking thoroughly after each addition to insure a thoroughly homogeneous mixture. Add a few drops of the carmine solution to give the desired tint, and lastly dilute to the desired consistency by the addition of water.

Of the many different drugs used as bases for toilet lotions, Irish moss proves to be highly satisfactory, as it yields with water a mucilage almost the consistency of syrup. Of the several formulas examined, the two following modified ones are best:

FORMULA V.

Chondrus	30
Water	960
Glycerite of starch	21
Sodium benzoate	2
Phenol	2
Essence jasmine	15

Wash the moss in cold water, place in a suitable vessel and add the water; heat to boiling on a water-bath for twenty-five minutes, strain and add the balance of the water. Add the glycerite of starch and other ingredients, except the perfume, heat on water-bath until all are dissolved, and strain again. Lastly, add the perfume.

FORMULA VI.

Chondrus	3.0
Glycerin	48.0
Boric acid	3.0
Alcohol	48.0
Zinc phenosulphonate	0.8
Water	sufficient, to 400.0
Perfume	sufficient
Solution of carmine	sufficient

Boil the chondrus in water, strain and add the glycerin, then add the balance of the water in which the boric acid and the zinc phenolsulphonate have been dissolved. Dissolve the perfume in the alcohol and add it gradually, shaking after each addition to insure a homogeneous mixture. Finally add carmine to tint to suit.

The phenolsulphonate adds to the antiseptic properties of the lotion, and, being quick-drying in nature, it is much desired in preparations containing a large amount of glycerin.

CHAP LOTIONS.

During the fall and winter there is always a great demand for chap lotions. Both of the following formulas yielded very satisfactory products:

FORMULA I.

Boric acid	8.0
Salicylic acid	15.0
Zinc phenolsulphonate	2.0
Menthol	0.7
Spirit of camphor	60.0
Glycerin	120.0
Compound tincture of lavender	15.0
Bay rum to make	500.0

Dissolve the acids and zinc phenolsulphonate in the bay rum and add the glycerin. Dissolve the menthol in the mixture of the compound tincture of lavender and spirit of camphor, and add to the acid solution a little at a time, shaking thoroughly after each addition.

FORMULA II.

Lemon-juice	40
Spirit of camphor	40
Bay rum	40
Glycerin	60

Add the glycerin to the lemon-juice and mix thoroughly. Incorporate the bay rum and then the spirit of camphor, portion by portion, shaking thoroughly after each separate addition.

COMMERCIAL COÖPERATION FOR NATIONAL UPBUILDING.

The experience of the Chamber of Commerce of the United States in dealing with national questions has definitely proved that the business men of the country in the management of their affairs should be foresighted. New laws are usually a matter of slow growth. Business men generally do not realize this, but if we look back into the history of important legislation in this country we will find that most legislative projects had their inception many years before they reached the stage of enactment. It has too often been the case, however, that business men have been almost wholly oblivious of the demand for legislation in certain directions and the steady growth of sentiment for such legislation as a result of the cumulative effect of discussion.

It is stated on authority that during the past five years some sixty-five thousand laws have been placed on the statute-books of the country. Many of them dealt with business directly or indirectly, and a considerable number of them were framed to correct unworkable or unjust legislation of the past. Many of the old measures, because of their deficiencies, clogged court calendars, added unnecessary uncertainties to business, and impeded justice. It would be interesting to know to what extent this might have been avoided if business years ago had tried in a careful, representative way to make this legislation right, and if legislators, on their part, had tried to understand honest, right-minded business men a little better.—*From an editorial by John H. Fahey, President of the Chamber of Commerce of the United States.*