

logic origin of many diseases and of antiseptics were not conceived by some ancient physicians, but a rather extensive study of the history of medicine fails to show that anyone had an accurate conception of either.

Other discoveries in this group are the X-ray and the radio-active properties of radium and a few other elements. We have not been able to find a record that anyone ever thought of these things until they were discovered. Finally, we have the radio and its wonders, which were not dreamed of until it was developed from Marconi's wireless telegraph. Several other manifestations of electrical energy could be listed in this group, and the end of these discoveries and developments has not yet been reached.

This is as far as we can proceed with our discussion within the limitation on our time. We have shown that there are interesting relationships between many modern medical practices and the practices of physicians in older times, and that there is a great deal of truth in the proverb "There is no new thing under the sun," but we have also shown that this proverb is not entirely true.

SOFT SOAP LINIMENT, SOFT SOAP AND SOAP LINIMENT.

PROPOSED FORMULAS FOR THE U. S. P.*

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LINIMENTUM SAPONIS MOLLIS.

Soft Soap Liniment, or Tincture of Green Soap, is widely used as a detergent. The U. S. P. VIII and X formulas call for soft soap, made from linseed oil. Such a product has a persistent linseed oil odor which remains after use for cleansing. The odor is so persistent that even after the odor of the lavender oil has been rinsed off the linseed oil odor remains. In the U. S. P. IX the soft soap liniment was made from a cottonseed oil soft soap. This preparation was free from objectionable odor. Another objection to the formula in the U. S. P. X is that there is more alcohol in the preparation than is necessary. This high alcohol content is used because of the difficulty experienced in dissolving soft soap in a menstruum of lower alcohol content.

The following formula is easily compounded, and overcomes the objections mentioned above:

Cottonseed Oil	305 cc.
Oil of Lavender	20 cc.
Alcohol	200 cc.
Deknormal Solution of Potassium Hydroxide	65 cc.
Deknormal Solution of Sodium Hydroxide	32 cc.
Water, a sufficient quantity	
To make	1000 cc.

Mix the cottonseed oil, oil of lavender, alcohol and the dekanormal solutions. When a clear solution results, add enough water to make the product measure 1000 cc. Filter.

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This product has the same soft soap content as the U. S. P. IX soft soap liniment, but contains about 130 cc. less alcohol. If the alcohol content is much less than this, the product is too syrupy in consistency.

Sapo Mollis.—Soft soap made by the U. S. P. IX formula is a much superior product to those made by the U. S. P. VIII or the U. S. P. X, wherein linseed oil was used. The objection to the linseed oil soaps is the persistent odor of the oil. When this product was made from cottonseed oil, as in the U. S. P. IX, this objection was overcome. The chief objection to cottonseed oil was the difficulty experienced in saponifying the oil. The fault is in the directions given in the U. S. P. for compounding; there being too much water present during saponification.

Saponification takes place more readily if no water, other than that in the dekanormal solutions, is added until after saponification is complete. Simply mix the oil with the dekanormal solutions and stir occasionally until an emulsion is formed, then set the mixture aside for about twenty-four hours. (No heating is required.) At the end of this time the oil will be saponified. Add enough water to make the product weigh 1000 Gm. The addition of alcohol as in the U. S. P. VIII and IX, or of glycerin as in the U. S. P. X, are unnecessary.

The substitution of sodium hydroxide for part of the potassium hydroxide lowers the cost of the product, but the extent to which it can be substituted is limited, as the use of sodium hydroxide in too large a quantity tends to make the soft soap "jelly-like."

The following formula and directions yield a very satisfactory product with the minimum of labor and attention:

Cottonseed Oil	430 Gm.
Dekanormal Solution of Potassium Hydroxide	100 cc.
Dekanormal Solution of Sodium Hydroxide	50 cc.
Water, a sufficient quantity	
To make	1000 Gm.

Mix the dekanormal solutions with the oil. Stir occasionally during the three hours, then set aside for twenty-four hours. Add warm water enough to make the product weigh 1000 Gm.

Linimentum Saponis.—Due to variations in soap, variations result in soap liniment when it is made by the U. S. P. formula. If, instead of using olive oil castile soap, this liniment is made from the required amount of olive oil and sodium hydroxide needed to make the given amount of castile soap, these variations are reduced. The liniment so made is less difficult to prepare and has less precipitate.

Olive Oil	64 cc.
Oil of Rosemary	10 cc.
Alcohol	700 cc.
Camphor	45 Gm.
Dekanormal Solution of Sodium Hydroxide	18 cc.
Water, a sufficient quantity	
To make	1000 cc.

Dissolve the camphor and the oil of rosemary in the alcohol, add the olive oil, then the dekanormal solution of sodium hydroxide. Stir occasionally and when clear, add the water. After twenty-four hours filter.

The quantities of olive oil and sodium hydroxide called for in the above formula will make 60 Gm. of olive oil castile soap, the amount of soap called for in the U. S. P. formula. Therefore, the only practical difference between the liniment made by the above formula and that made by the U. S. P. formula is the small amount of glycerin formed as the result of the saponification.
