

ADVANTAGES OF "ROUGH ON RATS."

"ROUGH ON RATS" is sold all around the world, in every clime, is the most extensively advertised and has the largest sale of any article of its kind on the face of the globe.

NO LOSS by breakage, leakage or evaporation.

WILL KEEP a thousand years in any climate. NO GREASE to soil the drawers or goods.

USED FOR INSECTS, BUGS, ETC., as well as for rats and mice.

ALWAYS DOES THE WORK. LOWEST PRICE of its kind. PAYS BETTER than any other.

CAREFUL DRUGGISTS, who do not sell arsenic and strychnine indiscriminately and yet do not wish to incur displeasure of Patrons by absolute refusal, can offer 15c. boxes of "Rough on Rats."



Gone where the Woodbine Twineth.

Rats are smart, but "Rough on Rats" beats them Clears out Rats, Mice, Roaches, Water Bugs, Fhes, B etles, Moths, Ants, Mosquitoes, Bed Bugs, Hen Lice, Insects, Potato Bugs, Sparrows, Skunks, Weasels, Gophers, Chipmunks, Moles, Muskrats, Jack Rabbits, Squirrels. 15c. and 25c. Druggists.

The Round Top Label is printed on RED PAPER, with black letters, with words POISON and ANTIDOTE. The SILE LABEL IS IN RED INK on white paper with words POISON, CAUTION, Raw Head and Bloody Bones and Antidotes, thus complying with all requirements of law.

The Antidotes are same as in Arsenical Poisoning

Druggists should recommend "Rough on Rats'

For Roaches, Buffalo Bugs, Beetles, Flies, Water Bugs, Croton Bugs, For Roaches, Buffalo Bugs, Beetles, Flies, Water Bugs, Croton Bugs, For two or three nights sprinkle "Rough on Rats" dry powder in, about and down the sink drain-pipe, when all the mass is from garret to cellar will dis-appear. The secret is in the fact that wherever insects are in the house they must drink during the night. This being a poison, it should be used only at night, and washed away early every morning down the drain Fifteen cent hores at dragists. Send for circular. How to destroy all kinds of Bugs, Insects, Vermu, etc." SEND FOR LITHOGRAPHS in Colors, Books Signs, etc

"ROUGH ON" ALL PREPARATIONS.

SEND FOR LITHOGRAPHS, CHROMOS, ETC.

E. S. WELLS, Proprietor and Manufacturer, JERSEY CITY, N. J., U.S.A.

Manufacture of Oleates.

Mr. G. M. Beringer recently communicated a paper to the Philadelphia College of Pharmacy, in which he dealt with the history and manufacture of oleates, especially the zinc, lead, mercury, bismuth, and copper compounds. Mr. Beringer prefers to use a perfectly neutral sodium oleate, and he succeeds in getting this by the use of a little alcohol (rectified spirit). The oleic acid employed should have a specific gravity of 0.890 to 0-900 at 60° F. The following are the principal formulæ, which we take from the report in the American Journal of Pharmacy.

ZINC OLEATE.

Oleic acid	1,000 grains
Soda (90 per cent.) Alcohol	160 " or q.s. 6 fluid drachms
Zinc sulphate	550 grains
Water, a sufficient qua	intity.

Warm the oleic acid in a capacious vessel on the water-bath to a temperature of 60° to 66° C. (140° to 150° F.), and having dissolved the soda in a mixture of the alcohol and 2 fluid oz. of water, slowly add the soda solution, stirring constantly until the acid is entirely neutralized, and a small portion of the resulting soap dissolved in alcohol yields but a faint pink tint on the addition of a few drops of alcoholic solution of phenolphthalein. Disscive the resulting soap in 48 bz. of warm water and filter if necessary.

Dissolve the zinc sulphate in 16 oz, of water and filter. Warm the solutions to 43° C (110° F.), and slowly add the zinc sulphate solution to the soap solution, stirring constantly. Collect the precipitate on a moist filter, wash thoroughly with distilled water ; finally dry on bibulous paper at a temperature not exceeding 38° C. (100° F.), and rub the dried mass through a fine sieve.

Care should be taken to observe that the temperature of the solution before mixing is 110° F., because if precipitated at a higher temperature the result is a fused mass of oleate of a greasy nature, which can only be dried and pulverised with difficulty, and the resulting powder is gritty. As thus obtained, oleate of zinc is a nearly white, impalpable, unctuous, slippery powder, fusing at 75° C., very soluble in ether, carbon bisulphide, chloroform, and benzol, somewhat less soluble in turpentine, petroleum ether, and alcohol.

COPPER OLEATE.

Oleic acid	1,000 grains
Soda (90 per cent.)	160 grains or q.s
Alcohol	6 fluid drachms
Copper sulphate	442 grains
Water, a sufficient qua	ntity.

Saponify the oleic acid as directed in the formula for zinc oleate, and dissolve the resulting roap in 48 oz. of water. Dissolve the copper sulphate in 16 oz. of warm water and filter. Warm the solution to about 140° to 150° F., and slowly add the copper solution to the oleate of soda solution, stirring constantly; warm until the copper cleate fuses into a mass, decant the clear supernatant liquid, wash several times with warm water. and finally dry on the waterbath.

Oleate of copper, as thus produced, is a bright green waxy mass, fusing at 49° C., very soluble in carbon bisulphide, chloroform, benzol, ether, turpentine, petroleum ether, absolute alcohol, alcohol and fixed oils BISMUTH OLEATE.

Bismuth oxide dried at 100° C. (212° F.) until it ceases to lose water ... I troy oz. Oleic acid. 3 troy oz. and 295 gr. Water, a sufficient quantity.

Rub the oxide of bismuth to a fine powder. and thoroughly mix it with the oleic acid in a capacious vessel, add 32 oz. of water and boil the mixture, replacing the water as it evaporates, and surring frequently until complete saponification has taken place and a small quantity of the mass dropped into cold water yields an ointment-like mass without any separation of oleic acid. Decant the water from the oleate and work the mass with a horn or wooden spatula to free it from retained water.

Bismuth oleate thus prepared is a creamcoloured mass about the consistence of an ointment, softening at the temperature of the body and fusing at 58° C. It is easily decomposed by contact with metals, and is but very slightly soluble in the usual solvents for oleates.