EDITORIAL NOTES

NEW AND NONOFFICIAL REMEDIES.

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

W. A. PUCKNER, *Secretary.*

CALCIUM GLUCONATE-SANDOZ.—Normal Calcium Gluconate.—Calcium salt of hexapentol-(2,3,4,5,6)-Acid-(1).—Calcium salt of $\alpha\ \beta\ \gamma\ \delta\ \epsilon$ pentoxy-pentane-carbonic acid.—$[HOCH_2CH(OH)CH(OH)\ CH\ (OH)\ CH(OH)\text{-}COO]_2Ca.H_2O$. It contains calcium equivalent to not less than 12.40 nor more than 12.80 per cent of calcium oxide.

Actions and Uses.—Calcium gluconate-Sandoz is used to obtain the therapeutic effects of calcium. It is more palatable than calcium chloride for oral administration and for hypodermic or intramuscular use is nonirritant.

Dosage.—Orally, for adults, 5 Gm. (75 grains) three times a day; for children, 2 Gm. (30 grains) three times a day. Intramuscularly or intravenously, for adults, 1 Gm. administered every day, on alternate days or every third day; for children, 0.2 to 0.5 Gm. administered every day, on alternate days or every third day.

Manufactured by the Sandoz Chemical Works, Basle, Switzerland (E. Fougera, Inc., New York, distributor). U. S. patent 1,648,368.

Ampules Calcium Gluconate-Sandoz.—Each ampule contains 10 cc. of a 10 per cent stabilized supersaturated solution of calcium gluconate-Sandoz.

Calcium gluconate-Sandoz occurs as white, odorless and tasteless granules, consisting of fine needle crystals. It crystallizes from an aqueous solution with one molecule of water and has the formula $(C_6H_{11}O_7)_2Ca.H_2O$. It loses completely its water of crystallization only after prolonged drying in a high vacuum at 105 C. A 3 per cent aqueous solution is slightly dextrorotatory. When heated it swells up, and during carbonization emits an odor of burning filter paper. It is soluble in cold water (1 in 30); soluble in boiling water (1 in 4 to 5), crystallizing on cooling. It possesses distinct tendencies to form supersaturated solutions. It is insoluble in alcohol and fat solvents. Cold, saturated aqueous solutions are neutral to litmus paper. Addition of diluted sulphuric acid to a 3 per cent aqueous solution causes only incomplete precipitation of the calcium sulphate, even on heating.

Dissolve 1 Gm. of calcium gluconate-Sandoz in 10 cc. of water; add 2 cc. of ammonia water and 5 cc. of ammonium oxalate: an immediate precipitation, which readily deposits on heating, results (*calcium*). To 1 cc. of a 10 per cent aqueous solution add 1 drop of ferric chloride: a canary yellow color is obtained (*α-oxyacid*). To 5 cc. of a 10 per cent aqueous solution add 0.65 cc. of glacial acetic acid and 1 cc. of phenylhydrazine (fresh) and heat the mixture on a steam bath for thirty minutes; allow to cool, and scratch the sides of the tube for a few seconds with a glass rod: a crystalline deposit of gluconic-acid-phenylhydrazide is formed. Filter the crystalline mass, and purify by dissolving in 10 to 15 cc. of hot water; add a small amount of charcoal and filter; allow the filtrate to cool: pure white crystals melting with decomposition at 200 to 202 C. are obtained.

To 5 cc. of a 3 per cent aqueous solution of calcium gluconate-Sandoz add 5 drops of nitric acid and 1 cc. of silver nitrate: not more than a slight opalescence appears (*chloride*). To 5 cc. of a 3 per cent aqueous solution add 2 cc. of alkaline cupric tartrate solution and boil: no reduction takes place (*glucose*). To 5 cc. of a 3 per cent aqueous solution add 5 drops of diluted hydrochloric acid and 1 cc. of barium chloride solution: no turbidity appears (*sulphate*). An aqueous solution meets the requirements of the U. S. P. tests for the absence of heavy metals (see U. S. P. X, p. 439).

Transfer about 0.2 Gm. of calcium gluconate-Sandoz, accurately weighed, to a large platinum crucible and moisten with 3 drops of olive oil; heat slowly and after carbonization heat the residue at red heat in an electric muffle furnace until it is completely white; bring the residue to constant weight: the residue represents not less than 12.4 nor more than 12.8 per cent of calcium oxide.

ACNE BACILLUS VACCINE (See New and Nonofficial Remedies, 1929, p. 369).

Hollister-Stier Laboratories, Spokane, Washington.

Acne Bacillus Vaccine.—A suspension of killed acne bacilli in physiological solution of sodium chloride containing 0.3 per cent of cresol as preservative. Marketed in packages of one 5-cc. vial, each cubic centimeter containing 200 million killed bacteria; in packages of one 20-cc. vial, each cubic centimeter containing 200 million killed bacteria.

PERTUSSIS BACILLUS VACCINE (See New and Nonofficial Remedies, 1929, p. 371).

Hollister-Stier Laboratories, Spokane, Washington.

Pertussis Bacillus Vaccine.—A suspension of several strains of killed pertussis bacilli in physiological solution of sodium chloride containing 0.3 per cent of cresol as preservative. Marketed in packages of one 5-cc. vial, each cubic centimeter containing 2000 million killed bacteria; in packages of one 20-cc. vial, each cubic centimeter containing 2000 million killed bacteria.

STAPHYLOCOCCUS VACCINE (See New and Nonofficial Remedies, 1929, p. 375).

Hollister-Stier Laboratories, Spokane, Washington.

Staphylococcus Vaccine (Aureus and Albus).—A suspension of killed *Staphylococcus aureus* and *albus* in equal proportions, in physiological solution of sodium chloride containing 0.3 per cent of cresol as preservative. Marketed in packages of one 5-cc. vial, each cubic centimeter containing 1000 million killed bacteria; in packages of one 20-cc. vial, each cubic centimeter containing 1000 million killed bacteria.

TYPHOID VACCINE (See New and Nonofficial Remedies, 1929, p. 378).

Hollister-Stier Laboratories, Spokane, Washington.

Typhoid-Paratyphoid Vaccine (Prophylactic).—A suspension of killed typhoid, paratyphoid A, and paratyphoid B bacilli in physiological solution of sodium chloride containing 0.3 per cent of cresol as preservative. Marketed in packages of one 5-cc. vial, each cubic centimeter containing 1000 million killed typhoid bacilli and 500 million each of killed paratyphoid A and B bacilli; in packages of one 20-cc. vial, each cubic centimeter containing 1000 million killed typhoid bacilli and 500 million each of killed paratyphoid A and B bacilli.—*Jour. A. M. A.*, October 5, 1929.

CHINIOFON.—Sodium - iodoxyquinolinesulphonate.—A mixture prepared from approximately four parts of 7-iodo-8-hydroxyquinoline-5-sulphonic acid, containing not less than 26.5 per cent of combined iodine, and 1 part of sodium bicarbonate. After preparation there is generally some chemical reaction, so that the product may contain a small amount of sodium iodohydroxyquinolinesulphonate in addition to the sodium bicarbonate and the uncombined iodohydroxyquinolinesulphonic acid. On dissolving the product in water, 100 parts of chiniofon yield approximately 85 parts of sodium iodohydroxyquinolinesulphonate.

Action and Uses.—Chiniofon, which is closely similar to preparations introduced under various proprietary names as wound antiseptics, has been found to be of use in the treatment of amebic dysentery. It is claimed that the action of the drug is probably due to its absorption and direct action through the blood stream on the amebas invading the bowel wall. The drug has been reported in some cases to produce diarrhea; but serious toxic effects do not appear to be common.

Dosage.—Orally, for adults, from 0.25 to 1.0 Gm. (4 to 15 grains) in the form of pills, cachets or solution, three times daily; for children, according to age; rectally, 1 to 5 Gm. (15 to 75 grains) freshly dissolved in 200 cc. of water at a temperature not exceeding 44 C. The course of treatment requires from seven to fourteen days. Combined oral and rectal administration has been used in acute cases and in the more serious chronic cases accompanied by obstinate clinical symptoms. It has been pointed out that the iodine content of chiniofon should be considered when chronic endamebiasis is accompanied by thyroid disturbance.

Chiniofon appears as a canary-yellow powder with no odor, or only faint odor, and possessing a bitter taste, but leaving later a distinctly sweetish aftertaste. It dissolves in water with effervescence due to the reaction of the uncombined sodium bicarbonate and iodohydroxyquinolinesulphonic acid. The sodium salt is soluble in water to the extent of about 4 per cent; is insoluble in alcohol, ether, chloroform and most of the organic solvents. Chiniofon is decomposed at 223 C.; a solution of chiniofon decomposes on boiling. The addition of strong acids changes the color to pale green and liberates free iodohydroxyquinolinesulphonic acid. To 10 cc. of the solution of chiniofon 1 per cent add five drops of ferric chloride solution: a deep emerald-green color forms. To 10 cc. of chiniofon solution 1 per cent add 5 cc. of copper sulphate solution: a dense white precipitate forms. Agitate 5 cc. of aqueous solution of chiniofon 1 per cent made slightly acid with diluted hydrochloric acid with 5 cc. of chloroform: no violet color appears in the chloroform (*iodine*). Acidify 5 cc. of a solution of chiniofon 1 per cent with hydrochloric acid, underlay with chloroform, and add one drop of sodium nitrite solution: the chloroform assumes the characteristic iodine color. To 5 cc. of a solution of chiniofon 1 per cent add 1 cc. of diluted nitric acid and 1 cc. of silver nitrate solution: a faint opalescence is apparent.

To about 1.5 Gm. of chiniofon accurately weighed into a small beaker add all at once and with rapid rotation 15 cc. of a solution of 10 cc. diethylamine in 90 cc. of anhydrous methyl alcohol. Decant the solution from the insoluble material onto a small filter moistened with anhydrous methyl alcohol. Collect the clear filtrate and subsequent washings in a porcelain dish of about 200 cc. capacity. Wash the precipitate, beaker, filter and funnel carefully with anhydrous alcohol until no trace of color is imparted to the alcohol. Allow the surplus alcohol to evaporate from the beaker and funnel, add 25 cc. of distilled water to the beaker, pass the solution through the funnel collecting the filtrate in a 250-cc. flask. Wash the beaker and funnel with separate small portions of water until all bicarbonate is dissolved; add to the solution methyl orange and titrate the bicarbonate with tenth-normal acid. The volume of tenth-normal acid used should indicate not less than 18 per cent sodium bicarbonate nor more than 22 per cent sodium bicarbonate.

To about 0.200 Gm. of chiniofon accurately weighed into a 35-cc. nickel crucible, add about 3 Gm. of anhydrous sodium carbonate. Moisten the mixture thoroughly with water, fill the crucible about three-fourths full with anhydrous sodium carbonate and apply the heat of a Bunsen burner. Heat carefully at first to avoid loss and finally to dull redness for five minutes. Allow the mixture to cool, place the crucible with contents in a 250-cc. beaker and add about 50 cc. of distilled water. When the mass is well disintegrated, pass the solution through as well-wetted filter and collect the filtrate in a 500-cc. flask. Wash the crucible, beaker, funnel, etc., well with small portions of distilled water until the filtrate is neutral to litmus paper. Heat the clear filtrate to near 100 C.; add potassium permanganate solution until a permanent purple color remains even after two or three minutes' heating. Add to the hot mixture a few drops of ethyl alcohol to remove the purple color and filter the hot liquid collecting the filtrate in a 500-cc.

flask. Wash the precipitate, filter, etc., until the washings are neutral to litmus paper, cool the solution and add sulphuric acid to distinct acid reaction, taking care to avoid loss from effervescence. To the acid liquid add a solution of 2 Gm. of potassium iodide, free from iodate, and titrate the liberated iodine with tenth-normal sodium thiosulphate solution. The volume of tenth-normal sodium thiosulphate used should indicate not less than 26.5 per cent iodine, nor more than 28.9 per cent iodine.

BACILLUS ACIDOPHILUS CULTURE-HOLLISTER-STIER.—A pure culture of *B. acidophilus* in bottles, each containing 200 cc. It contains not less than 150 million viable organisms (*B. acidophilus*) per cubic centimeter at the time of issue.

Actions and Uses.—See Lactic Acid-Producing Organisms and Preparations (New and Nonofficial Remedies, 1929, p. 220).

Dosage.—From 15 to 30 cc. in milk or water to which has been added a suitable quantity of lactose, three times daily. Each bottle bears an expiration date.

Manufactured by the Hollister-Stier Laboratories, Spokane, Wash. No U. S. patent or trademark.—*Jour. A. M. A.*, October 26, 1929.

ASSOCIATION PROGRESS.

The unwisdom of selfish exclusiveness is becoming more and more apparent to pharmacists. They are realizing more and more that their success is in the promotion of pharmacy; they have come to see that their interests are identical with those of others engaged in the drug business, of which pharmacy is the foundation. They are becoming aware that they are affected by general influences bearing upon pharmacy and that their problems can be solved only through coöperative effort. It is through a realization of and putting into practice the underlying principles of organization they can hope for success; helpfulness is the ideal of both professional and trade organizations.

CHAIN STORE STUDY.

In the chain store inquiry the investigation of the comparative selling prices of chains and independent dealers has recently been begun in an agricultural region. Des Moines, Iowa, has been selected as the center of the next study. The program for Des Moines also contemplates a study of the comparative prices of chain and independent stores in a number of smaller towns within the Des Moines wholesale area.

A preliminary survey of Des Moines was begun by a field force and this crew will divide the city into districts for pricing, make the necessary contacts with wholesalers and chain stores, ascertain the items handled by both chain and independent grocery, drug and tobacco retailers, prepare lists of items bought direct and through wholesalers and take the other necessary steps preparatory to the actual pricing work. As soon as this preliminary study has been completed the staff will be increased to the size necessary to carry on this work.

THE CANADIAN PHARMACEUTICAL ASSOCIATION.

The Canadian Pharmaceutical Association will meet in Nova Scotia this year, beginning August 2nd, at which time a tablet will be unveiled in memory of Louis Hebert, the pioneer apothecary of this continent. Trips will be made to the land of "Evangeline" and an interesting program is being provided. We are indebted to Secretary Dr. R. B. J. Stanbury for a photograph of the Sir William S. Glyn-Jones Memorial Tablet, recently unveiled in London.

PERSONAL AND NEWS ITEMS.

DR. WILLIAM H. WELCH.

In the *New York Times Magazine*, of April 6th, there is a picture of Dr. William H. Welch, drawn from life by S. J. Woolf. It is the picture of a man who matriculated in a medical school about sixty years ago. As teacher, his career began as instructor in Bellevue Medical College; since then his name has been foremost in the founding of Johns Hopkins