3. Prepared from drug defatted with carbon tetrachloride gave a rise of 18 mm.

CONCLUSIONS.

From the results of these experiments I find that

1. Defatting the drug with carbon tetrachloride overcomes the precipitation difficulty.

2. That defatting the drug with carbon tetrachloride is far preferable to the use of paraffin as a defatting agent.

3. That removal of the fats from the fluid extract does not affect its therapeutic activity.

4. That the removal of the fats from the fluid extract does not hasten the deterioration of the preparation.

EXPERIMENTAL LABORATORIES,
NORWICH PHARMACAL COMPANY.

STAINLESS STEELS IN THE DRUG STORE.*

BY F. J. BLUMENSCHEIN.

Stainless steel developed by Dr. C. M. Johnston, Director of Research of the Crucible Steel Co., is defined as—Rustless, Stainless, and Acid-resisting Steel.

It differs from ordinary stainless steels in a number of particulars, its special resistance qualities are contributed by using three resisting elements in addition to iron, while the stainless steels usually contain only one resisting element—chromium. The steel under consideration contains chromium, nickel and another special alloying metal along with iron, carbon, etc.

Stainless steel, to be made stainless, must be heated in an electric furnace to about 1500° C. and cooled or tempered in oil and the coating of oxides removed by polishing; it becomes very hard and takes a keen edge after the heat treatment. In the annealed condition it is not stainless but it must be annealed to be worked.

This special steel on the other hand requires no heat treatment to render it stainless and acid-resisting; however, it must first be polished to remove the oxides; thereafter, no further polishing is required, as it will not rust or tarnish.

Stainless steel is not entirely stainless; in time it becomes colored but it does not rust, as we ordinarily think of rust.

A number of different alloys are being manufactured and sold under the general titles of stainless steel or rustless steel—without regard to the nature of the alloying metal, whether it be nickel or chromium or other metal conferring similar properties to the alloy. In many cases these steels are fabricated without thought being given to some of the uses that manufactured articles of this product are employed in or used for.

This steel is made in many grades, each grade being designed for some particular class of manufacture. It can be stamped, drawn, cast or machined, etc., into almost any form possible for iron, brass, steel or Monel metal. The metal parts of soda fountains could all be made from stainless steel—drain board, sink,

* Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., Cleveland meeting, 1922.

cooler, pipes, draft arms, etc. These would last longer than an average lifetime, as no polishing would be required after the first factory polishing; none of the acids, organic or inorganic, which are used at soda fountains have any appreciable effect upon it. If such a fountain should cost a thousand dollars more than the one containing brass, silver, block tin, etc., the cost of labor in daily polishing would soon make up such extra cost and there would be no repairs necessary.

The metal parts of balances and weights could be made from this metal, which remains permanently bright.

Spatulas of some varieties of stainless steel on the market have changed color while in stock in the wholesale drug houses; this is probably due to improper heat treatment, or the use of an alloy unsuited to such purpose.

Ointment boxes, suppository moulds, tablet triturate moulds, large and small pans, retort stands and rings and, in fact, practically all utensils now used which are made of iron, tin, aluminum, brass, steel, etc., could be replaced by stainless steel. Citric and lactic acids, in all concentrations, have no effect upon it. Phenol, salicylic acid, mercuric oxide, ammoniated mercury, concentrated ammonium sulphide are not affected nor do they act upon the metal. Saturated solution of mercuric chloride and tincture of iodine will react, producing marks which can be removed.[1] Wire may be imbedded in glass in a similar manner to platinum.

ABSTRACT OF DISCUSSION.

The author was asked relative to the price of the alloy. He was not informed, but stated that the price was about the same as that of aluminum. Asked whether the alloy was attacked by the mercury in mercurial ointment, reference being made to its manufacture into ointment boxes, the author replied in the negative.

MIXTUM COMPOSITUM.*

BY OTTO RAUBENHEIMER.

Mixtum Compositum, a medley, a chaos, a mischmasch, an "everything together," is the named used in pharmaceutical parlance, at least in my store, for a polypharmacal mixture, especially such a one as contains one or more incompatibilities. The subject of incompatibilities should be given much more attention in colleges and at pharmaceutical meetings. In his daily routine a good prescription pharmacist has quite a number to deal with. From the abundance of incompatible prescriptions at my disposal I have thus far compiled a number of files for two colleges, namely, the prescription department of the University of the State of New Jersey and the New Jersey College of Pharmacy. From that supply I also started the Department of Prescription Difficulties in *The Practical Druggist* in 1912. Still they are coming, and I will select at least one, perhaps the worst of the lot, the one containing the most ingredients and the most incompatibilities, for discussion at the Section of Practical Pharmacy and Dispensing—*the* Section for the retail pharmacist. Here is the Mixtum Compositum:

[1] Specimens were submitted by the author—they had all been subjected to acids and alkalies and many reagents; a stained piece showed the effect of mercuric chloride, as stated in the last paragraph of the paper.

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