

*Method of Employing Vegetable Rennets.*—These ferments have been used from the most remote times to prepare curds of milk and cheeses. Homer speaks of them in the Iliad.

In the west and the middle of France it is customary to use flowers of the wild artichoke (*cynara cardunculus*), which looks like a large thistle, attaining a height of more than a meter. Two or three stalks of this plant, which usually grows in uncultivated places, are often raised in gardens for the purpose of making compressed curd or cottage cheese. A pinch of the flowers tied in a little muslin bag is placed in the heated mill; at a temperature of about 65° C. coagulation is very rapid.

The true cheese rennet (*galium verum*) is one of the madder tribe and is very common in our meadows. This perennial herb, half a meter tall, has leaves in whorls of 6 to 12. Its flowers are small and numerous, of a clear yellow and with the odor of honey; they appear from June to September. In the west of England the flower heads are employed for the preparation of cottage cheese. Mixed with calf rennet they are used in making Chester cheese, to which, moreover, they impart a yellow color.

In the Balearic Isles the peasants, who are very fond of clotted milk, prepare it as follows: The milk is boiled, and while still very hot it is stirred with the young branch of a fig tree, left crosswise. Almost at once the milk forms a homogeneous mass which is immediately eaten with a spoon. The fresh fig branches may be replaced by a rennet-forming solution procured by macerating young roots in salt water. This solution acts rapidly upon raw as well as upon boiled milk, at about 70° C.

In Lapland and in the villages of the Italian Alps the curd is prepared with the leaves of the common butterwort (*pinguicula vulgaris*). This little perennial herb dwells in the peat lands and the humid places of the extreme North and of mountainous regions. In the center of its foliage rosettes rise in May and August, its flower stalks of a height of 8 to 15 Cm. The flower, provided with a spur, is blue, violet, rose-pink or white.

In Japan the leaves of a very widely grown tree, the paper mulberry, are used (*broussonetia papyrifera*); in the warm regions the juice of the papaw (*carica papaya*), etc.

The seeds of the *puneeria* or *witania coagulans*, one of the *solanaeæ* of India, are very rich in rennet. When macerated in salt water to which 4 percent of alcohol has been added they yield a solution which keeps well and whose activity almost equals that of animal rennet.

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## EXPERIENCES OF A WOMAN PHARMACIST.\*

BY MRS. MAY O'CONNOR DAVIS.

About seven years ago, upon the successful termination of five years at College, with a resulting Master's degree in botany in hand, I decided the nearest I could ever get to Medicine was Pharmacy, and planned forthwith to take the Pharmacy Course. My decision called forth much anger and sorrow from relatives, who

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claimed that I would have to sell postage stamps, dispense soda, dress windows and hand out all kinds of advice. I have done all these things, and more.

Upon my completion of the university course in pharmacy, while I was patiently awaiting my state board examination, an offer came to me to substitute as teacher of chemistry in a medical college for women. At first I hesitated. I had taught botany from the baby grade right through to senior class in college, but chemistry! After much pleading I promised the dean of the college to be ready for the first lecture. I shall never forget that day! It resolved itself into a general quiz by and of the green teacher.

At the end of the hours spent with a freshman and sophomore class, however, I realized my first work would have to be a general survey of inorganic chemistry, with much stress upon the U. S. P. and N. F. tinctures, liquors, galenicals in general found under this group, for, would you believe it, these embryo medicos failed to have the slightest idea about the difference between tincture of iodine, U. S. P., a Lugol's or a Churchill's tincture of iodine. In the organic group, one student never associated phenol and carbolic acid, though she knew the graphic formula perfectly.

At the end of six weeks I gave a test. The results were more favorable than the first quizzes, yet I was not satisfied. Upon advice I called upon a professor of another medical college, and told him the quandary I was in and asked his advice about the whole situation, including the physiological and toxicological chemistry I was slated to give. His talk proved other than satisfactory, since I found he was having equally hard work with his students. It was at this time I was informed that I would have to stick at the post for the rest of the year, since the regular teacher could not return. I remained and I'll warrant you, though these students were training in a homeopathy institution, they will never forget the drilling and drilling they received in United States Pharmacopoeial and National Formulary products that I gave them during their first days in the medical college. Here at least I feel as if I had done some propaganda work for the U. S. P.

Very often when some of the doctors had queer prescriptions to be dispensed, or they were not satisfied with what was being sent their patients in the hospital connected with the college, they would come to my laboratory to seek an answer to their queries. One doctor had prescribed a lead water wash—he found that the patient could not tolerate the wash which was being used for a nipple wash. Upon questioning, I decided the doctor wanted a dilute lead subacetate solution instead of the Goulard's extract. This was made U. S. P. and as such caused no further trouble. One of the teachers was advised to use Dobell's solution as a gargle. She hemmed and hawed. Why should she use a preparation that was so weak in carbolic acid as N. F. Dobell's when she could get Dobell's tablets and make her own solution? I told her Dobell's was always the same, tablet or solution, 0.3% phenol, but, of course, if her doctor thought it wise we could readily increase the 0.3% to 0.5% in the original Dobell's solution. One day a doctor wrote a prescription thus, calcium sulphate, kali iodide, of each one drachm, mix and make into six powders; one every three hours. The pharmacist hesitated. We consulted and then called the doctor to the telephone. Yes, he knew what he wanted! He wanted calcium sulphate, and it was for boils. I recalled that oftentimes calcium sulphide is given for suppuration, but I hesitated to dispense plaster of Paris

and told the medico as much. He became indignant and refused to let us dispense at all; in fact, he took the prescription to a near-by druggist, who was also unwilling to compound. I never heard whether that doctor was able to make a mess of his patient's stomach.

One of the finest doctors came to me one day, and told me he wanted a liniment for his horse's legs—he had tried turpentine alone, also tincture of iodine; neither gave the desired results. Now he thought that if I would mix the two maybe the outcome would prove more beneficial. Immediately the incompatibilities I had tried so hard to master flashed across my mind. Iodine and turpentine! Never. To satisfy the old gentleman, since he was willing to take a chance, I mixed four ounces of tincture iodine U. S. P. with rectified spirit of turpentine. Nothing happened except that the oil tended to separate from the tincture. Not being satisfied, I told him I would add four ounces of turpentine to four ounces of iodine crystals. He was game. Placing the crystals of iodine in a mortar, which I had put in a laboratory desk sink for protection, I started to pour on the turpentine. There was just a little fizz-fizz, then a volume of the most wonderful violet-colored fumes which flew toward and hung around the ceiling of that laboratory for several days. Needless to say, the doctor was convinced. In passing it might be of interest to know that this same stunt made explosions in several moving picture chemical laboratories very real, as my brother, who is interested in the business, used it several times for Pearl White; it was also the supposed cause of the explosion scene in the "Hungry Heart."

Iodine furnished much material for research and thought. The ointment used generally in clinic and hospital was the U. S. P. ointment. To facilitate dispensing, a solution of the iodine and potassium iodide in glycerin was kept in a stock bottle; when prescriptions came in for the ointment the necessary amount was measured off and incorporated with required amount of benzoinated lard. The ointment as such was all right but, as one doctor said, he did not get full effect of the iodine on account of the base used. Was there no other way of administering the iodine? Following an idea which was being worked upon by the late John Roemer, a former member of this branch A. Ph. A., I suggested incorporating the iodine with a vegetable oil and oleic acid. I used sesame oil, oleic acid, iodine and sodium iodide. The resulting supernatant liquid, which resembled a very dark brown syrup, was applied as an ointment and seemed to bring fair results. I believe this idea of working iodine up with a vegetable base which can be readily absorbed by the body has been worked out by several large pharmaceutical firms.

These are a few of the many interesting things I have met with since I have been in pharmacy. In closing I might say that the woman pharmacist finds a large field to work in as a hospital and clinic pharmacist. Many times she has it in her power to suggest to the superintendent and the board of trustees many little things that may prove a big saving to the institution and which will also win many a doctor to become an admirer of the U. S. P. and N. F., rather than a scoffer. Her propaganda work would lie in suggestions, such as, that *Liquor Cresolis Compositus*, *Magma Magnesia*, *Magma Bismuthi*, *Liquor Antisepticus Alkalinus* and *Linimentum Camphorae* be made up in  $\frac{1}{2}$  and 1 gallon stock quantities, instead of ordering from the outside. This and the pleasant surroundings make the hospital work a fine field for the woman pharmacist.