Triturate the chlorinated lime to a smooth mixture with the water and add the $MgSO_4$ crystals to this. Allow the interaction to take place at ordinary temperature, with frequent stirring. When the reaction is completed, usually in five or six hours, filter. In actual practice I have been in the habit of using three times the amount of solids. After complete precipitation and filtration, ascertain the amount of available chlorine present by the U. S. P. method and standardize the solution to contain 0.5% of nascent Cl and it is ready for use.

When you consider the simplicity of the whole process and the good results obtained (equal to any produced by the Carrel-Dakin Solution), the positive absence of any irritant, as any $Mg(OH)_2$ which might remain in the preparation has a mild stimulating effect of its own on the epithelial cells, I trust that you will agree with me that it has been well worth while calling your attention to *Duret's* Solution again.

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THE GREAT NEED FOR COMMERCIAL TRAINING.*

BY H. S. NOEL.

A learned professor in an eastern school of pharmacy remarked to his class in microscopy not so many years ago that it behooved each individual taking the course to pay strict attention to this subject because, after graduation, when the dream of the future came into realization and it became necessary to use the microscope to identify starches in crude drugs, his teachings would prove their value. Those of us who had spent some five or ten years in the drug business before going to school doubted the sincerity of the worthy professor. Those who had little or no experience took his remarks seriously.

It is interesting to note that there is constantly being heard, whenever pharmacists gather together, an undercurrent of discussion about the time when pharmacy will again come into its own. Only a month or so ago a prominent member of the American Pharmaceutical Association read a paper at a state meeting in which the whole trend of thought was bent strongly to the near future when professional recognition would be given to pharmacy. One hears on every hand talk of raising prerequisites, increasing the years of study, granting of higher degrees and classifying places of business, until the writer confesses that he is beginning to feel very much like the Irish woman who, on seeing her boy marching out of step down the street in a military parade, remarked: "And everybody's out of step but me own boy Danny."

The merchandising expert of one of our great metropolitan newspapers recently made the remark that the grocery business was in a sadly demoralized state, due to the fact that there are more stores than needed, in some cities as high as one to each twenty-two families. It is his impression that conditions will be better at some future time and standards will be raised because the chain groceries are training men to become merchandisers and managers with the idea of opening new stores and having skilled men to run them. Instead of staying with the chain store,

* An address before the Section on Commercial Interests, A. Ph. A., Cleveland meeting, 1922.

however, these men will eventually go into business for themselves and thus will conditions slowly improve.

It would be interesting to take a poll of the classes in our schools of pharmacy and to learn at first hand what actuates our young men and women in attending college and what their plans are for the future. I venture the opinion, after close observation and numerous talks with students and proprietors, that a very large proportion of the men and women in the drug business are in it primarily to make money, to attain independence, to safeguard old age and to build a competence.

It is a serious question as to whether our schools of pharmacy are doing their duty by students in not making it possible for them to go out into the business world better fitted to practice their profession. Truly, pharmacy itself is a profession. The schools, however, are training and teaching students in lines of endeavor that are a pitifully small part of the work they expect to engage in.

The Harvard Institute of Business Research, much quoted in the last few years, investigated the businesses of 187 stores ranging in sales from less than $10,000 to those over $100,000. The largest number of stores did volumes of between $40,000 and $50,000. Eighty-five druggists furnished figures on prescription filling in proportion to the percentage of total sales. The lowest figure was 10 percent, the highest 45 percent. Most interesting, however, is the fact that the common figure was 10 percent. The sales of proprietary medicines reached as high as 67 percent in some stores. The common figure was 22 percent. The prescription business, together with proprietary medicines, commonly amounted to only about one-third of the total sales.

Commenting on this, A. M. Burroughs adds the thought that druggists have still another favorite way of losing profit that is rightfully theirs, and that is in charging for prescriptions. A large proportion of the druggists I have met and talked with do not know how to base profits or to figure overhead expense and turnover.

A respectable business man is not only an asset to the community in which he lives and does business, but I maintain that he commands greater respect by far than a down-at-the-heel professional man—give him whatever title you please. The fact that he is a good business man, instead of detracting from his professional standing, will, I maintain, be a great asset to him.

As never before, business is becoming more and more a highly respected calling, and with good reason. It takes no small amount of training and merchandising skill to conduct business successfully to-day. Truth in advertising, nationally advertised merchandise and highly competitive markets are weeding out the cheats, liars and incompetents. Most unfortunate, however, is the fact that a business man may be honest, may be actuated wholeheartedly by a desire to do right, by a desire to enjoy prestige and to command the respect of his fellow citizens, but his business incompetency bars his progress to the higher levels, and that holds true despite college degrees and professional skill. One condemns the cheat and the liar, but pities the incompetent.

Is it unreasonable to suppose that hair nets, bathing suits, phonographs and à la carte lunches would be economic necessities as side-lines if there were enough legitimate drug business to test the capacity of stores? What does the average college of pharmacy graduate know about advertising, selling, mark-ups, etc.,

when he leaves college? What equipment has he other than training as a pharmacist that enables him to go out and apply economic laws to his profession? What training, in fact, does his college course give him to assist him in building a good prescription business?

Such authority as Bradstreet reports that failures in business are naturally inclined to place the blame on causes beyond control, yet Bradstreet says that in 1918 eighty-six percent of the business failures could be attributed to personal responsibility. Leading all other causes was incompetence, followed by inexperience, lack of capital and unwise credits. The writer is not unmindful of the fact that this report was not applied to the drug business in particular, yet figures on other lines of business will show that essentially the same fundamentals apply to practically all lines of retail endeavor. Your grocer, hardware dealer, shoe retailer and jeweler have never taken a course in their callings.

It may safely be said that physicians as a class are better business men than formerly, yet physicians have little to sell that is tangible. The same can be said of engineers, lawyers, teachers, dentists, and so on down. In each profession business training is an asset, even though the profession has nothing to sell but a service. On the other hand, the pharmacist buys, sells, and deals altogether in tangible commodities. His professional skill is an adjunct only. A large part of his success indeed depends much more on his ability as a merchandiser than upon his training as a pharmacist. Basically, the pharmacist will be most successful in proportion to his ability to buy, advertise, sell and manage. After all, there is nothing in the most Simon-pure professionalism that does not call for a degree of commercialism and would not be the better for it.

There are in the United States approximately 49,000 drug stores, yet almost half of them are rated at less than $2,000 by commercial agencies. Less than 25 percent are rated between $2,000 and $5,000 and only 17 percent between $5,000 and $10,000. Only 8 percent have credit ratings of $20,000 or over.

That such a condition continues to exist is largely the fault of well-meaning schools of pharmacy that go on teaching the same subjects year after year and giving practically the same training to their students that obtained in 1890 when drug-store items numbered 2700 instead of 46,000 as they do to-day.

What student can afford to attend a school of pharmacy requiring three years or more of study for a degree with the prospect of going out into the commercial world and demanding of a proprietor a salary commensurate with his training and skill, when he knows that the owner of the business requires only 10 percent or less of his time at the prescription counter? To the drug-store proprietor the clerk is an investment; he is paid in proportion to what he brings in returns. How discouraging it would have been to a graduate in pharmacy to have overheard a remark made to me by the proprietor of one of the biggest independent stores in the country only a month ago. Standing in his front store he pointed out a young man at the prescription counter busily engaged in compounding. He said, "See that chap up there? I'm paying him $30.00 a week. It's all he is worth to me, yet he cannot seem to understand why I do not increase his salary, since he knows that I'm paying that man over there behind the sundries counter $45.00 a week. This last chap is a salesman, a merchandiser. That boy up there has been trained in a school of pharmacy to be a prescription man. He has spent three years in

college while this other chap was working behind my soda fountain." Both are bright boys, yet this retailer says he is paying the first all he earns and more, and in the same breath adds that there is no limit for the second man. What is the answer?

I have been told by college professors that our universities have no time for commercial courses, that this is a field that is adequately covered by business colleges. Nothing is more fallacious. It is not bookkeeping that our students need; it is courses in economics. Our bigger universities are finding courses in business administration popular, just as courses in advertising and journalism have prospered as part of the curricula of many colleges.

A college student approached the writer a few months ago at the conclusion of a lecture on economics of retailing. He asked if he might come to Indianapolis after graduation and spend a day in the interests of a better knowledge of the drug business. Said he: "My father died a few years ago and my uncle is running my father's store until I can get registered. I'm concluding my third year at the university and supposed I was getting along fine. After hearing you talk to-night on buying, selling, turnover, overhead expense, etc., I have come to the realization that I'm going to take charge of a business that I virtually know nothing about. I'm afraid of the prospect. Most of all I want to be successful in business. How shall I go about learning how it is done?"

I heartily agree with our present methods of teaching pharmacy. I would not be misunderstood in regard to what is being taught. It is what is not being done and what should be done that is the basis of this argument. I know of certain members of teaching staffs in our schools of pharmacy that are unalterably opposed to teaching courses in commercial pharmacy. Some of them have never spent a day behind a drug-store counter and many of those who have had retail experience have forgotten that times have changed.

I listened to the president of a university tell the members of a state association recently of plans for better college-trained pharmacists. I listened to the applause and noted carefully the rising vote of thanks accorded this man of letters whose life had been spent with books and theories and whose words of wisdom, however sincere, in my opinion fell far short of the opportunity that his school had in doing a real constructive, lasting good for pharmacy. I wondered if those present realized that higher courses and advanced teaching meant higher salaried clerks, no better equipped for the work at hand than those of less technical training.

Is pharmacy to continue to delude itself into thinking that the time will come when the learned apothecary will again come into his own? We think and plan in terms of higher technical training, forgetting that a recent investigation showed that out of thirty druggists interviewed seven had never taken an inventory, and one of these was heard to remark that he had started to once but "never again." Eight of thirty reckoned profits on costs instead of selling price. Twelve of thirty charged salaries for themselves in the expense account. Where the other eighteen hoped to secure their salaries is doubtful. Presumably, they were expected to come out of profits. It is a difficult matter to find any two druggists who agree on what it costs to do business.

It is a pleasure to note that some of the more progressive schools are teaching commercial pharmacy, and it is safe to say that the graduates of these schools will make their presence felt in the drug business.

Let us keep up the standard of entrance requirements to schools of pharmacy. Let us continue to instruct our students in the subjects now being taught, but with a due consideration of what they will be expected to need when they enter into business for themselves or seek employment in drug stores.

The properly trained business man-pharmacist will think better of the drug business as a calling if he knows how to do business. He will be less likely to condemn it as a career for his sons and have more occasion to be glad and proud of his work. All of us naturally enjoy doing those things at which we are successful.

One hundred years ago Old Doctor Webb's Apothecary Shop supplied the modest needs of the good folks of Salem, Massachusetts. The standbys were chamomile, green salve, salts, plasters, lint, lancets, brown Windsor soap, quill pens, red wax wafers and cobwebs. Service and distribution did not mean much. The drug business has evolved. Social groups are no longer sufficient to their own needs; life is more complex and much more pleasant. We think to-day in terms of efficiency. We judge things by their usefulness. The present-day drug store is a thoroughly modern institution. Who would have it as it was? It represents the modern trend and performs a mighty important function in the economic scheme of daily life.

The bulk of the stores of the country have invested capital of from three to ten thousand dollars each, invested in the products of from fifteen hundred to three thousand manufacturers assembled from all corners of the earth. The number of items ranges from three thousand to five thousand. The lines carried in stock will approximate thirty in the city, and in country stores from fifteen to fifty. It takes business brains to conduct establishments such as these at a profit. It requires buying skill; it necessitates system, salesmanship and managerial ability to keep this kind of a ship going full speed in the right direction. Where is the young man going to get this needed experience if not in a school of pharmacy? He cannot be expected to learn from a preceptor that which the preceptor himself does not know. Training in the economics of the drug business should be given in every school of pharmacy. It is just as much of an essential as materia medica, botany, pharmacognosy and chemistry.

There is a need for strictly professional pharmacists to whom business training might be of minor consequence, but the demand for such men and women could very easily be filled by a small fraction of the number of schools of pharmacy now offering degrees.

To you druggists who have occasion to employ clerks, this question is almost as important as it is to the student about to take a college course. Given a choice, how many of you would take long to decide between a professionally trained pharmacist and one who has combined with his college training the ability to safeguard your interests by increasing sales, systematizing your accounting methods, hastening your turnover and adding greatly to your profits? Could you not afford to pay such a man what his college training should warrant his asking and would you not be glad to do it?

It is sincerely to be hoped that our schools of pharmacy may see the wisdom of including pharmaceutical business training in their courses of study, or at least giving students the option of shaping their courses to meet their needs. The sooner this condition is brought about, the sooner will pharmacy take its rightful place among not only the professions but among the highly respected, substantial businesses of our towns and cities.