

This volume of 25 mils solution, when added to 75 mils of distilled water, makes a 5 percent suspension of silver iodide.—By John K. Thum, *American Journal of Pharmacy*, November, 1915.

Detection of Arachis Oil in Olive Oil:—Arachis oil, more generally known as peanut or ground-nut oil, is quite frequently used to sophisticate olive oil. The following method for its detection is suggested: One mil of the suspected oil is heated with 5 mils of an 8 percent alcoholic caustic potash solution for four minutes in a flask provided with a condensing tube. After cooling to 25°, 1.5 mils of a mixture of one volume of glacial acetic acid and two volumes of water are added, followed by 50 mils of 70 percent alcohol. If the solution is turbid, it is carefully heated until perfectly limpid, is then cooled gradually and the temperature at which it becomes turbid is noted. Pure olive oil becomes turbid at 13.5°, that containing 5 percent arachis oil becomes turbid at 16.9°; that containing 10 percent becomes turbid at 19.8°, and so on. The higher the percentage of arachis oil present the higher the temperature at which the suspected oil becomes turbid.—*The Druggists Circular*, October, 1915, page 665.

THE MERITS OF PHARMACY.*

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In timid and hesitating mood, pharmacy steps into the circle of the older and more venerable professions, doubtful of cordial reception. Will they welcome her as a legal sister, or will they turn on her as an intruder? It is not much more than a generation that pharmacy has laid claim to full recognition, at least in the United States, and there is still much opposition to this claim. It is said that she lacks the dignity of a science, and is tainted with commercial desires and tendencies. She possesses neither the venerable age of philosophy, nor the majesty of law, neither the sacredness of theology, the benign power of medicine, nor the depth of natural science. She may be an art, an accomplishment, a skill, but no science.

Whosoever looks upon pharmacy in this way knows but little of her merits, and judges superficially. It is true she does not surround her work with outer glare and glitter. In her daily practice we look in vain for the pomp of judicial display, or the incense and music of sacred worship; nor is there the mysterious dignity of medicine. In a modest, quiet way she stands back and performs her duties without ostentation. Other sciences and professions have gone the same thorny path before they found full recognition. It is nearly one hundred years ago,—in 1824,—that a young pharmacist, Justus Liebig, was appointed the first professor of chemistry at a German University. Raised as a pharmacist in his city, and extending his knowledge of chemistry in Paris, under Gay Lussac and Humboldt, he recognized the possibilities of his vocation, and his master mind conceived ideas and inventions that created not only a new science, but also a new industry. The older professors of Giessen looked upon him with ridicule and disdain. Chemistry might be a toy for scientific men,—a science, never! But the young pharmacist, only twenty-one years old, worked patiently along, and before his death he had become a giant among his peers and a benefactor of the whole world.

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Where chemistry stood then, pharmacy stands today. Chemistry has since performed wonders, but her great achievements were not due to theoretical deductions and philosophical arguments alone. The chemical thinkers, following Liebig's example understood how to apply the results of their minds to practical purposes, to the needs and demands of daily life, and thereby make them popular. It is in this adaptation that the strength and influence of all science lies today. The times of abstract thought and mere philosophical arguing have gone. The sage of the middle ages who pondered quietly in his study and built up around himself a new and beautiful world of mental ideals, has passed away. His writings, understood only by a few, are still the pride of scientific libraries, but their mystic pages are no source of inspiration or power. Knowledge has long ceased to be the mysterious possession of a few, who were looked upon with awe by the wondering crowds. Knowledge, today, is the property of all; it is demanded and given like air or water, common and accessible to everybody. In this general distribution of useful knowledge lies the duty and the power of a university. It is not erudite discourses and essays, however deep and beautiful they may be, that make a school of learning great; it is the ability to use knowledge and science for the benefit of all mankind; to come forth among the people like the distributor of blissful gifts, and spread blessing and happiness among the sick and ignorant.

If these premises are correct, if this conception of the mission of a university is true, pharmacy may safely step forward and claim full recognition. Her teachings are not in the abstract, her doctrines are not those of speculation and theory, her work is not for the few select, but for all, the highest as well as the humblest. She does not stalk about on stilts, nor does she soar to heights unapproachable to the masses. She walks in common garb in the streets and highways, carrying small and humble gifts, that she willingly distributes among the sick and needy. She talks in common words, ennobled only by looks of mercy and depth of feeling. It is not by grandiloquent phrases, but by quiet and effective deeds that she accomplishes her daily task. Relieving the sufferer, healing the sick, soothing the afflicted, are her watchwords, and her days are spent in spreading health and blessing.

This humble work, however, is not done without mental strain and the efforts of thinking minds. In pharmaceutical laboratories all over the world thousands of experiments and assays are daily performed to discover new chemicals, new qualities of minerals and plants, new combinations of older medicaments. A special branch of chemistry has grown up,—pharmaceutical chemistry,—with its own laboratories and apparatus. Such chemical works of enormous size are erected in all civilized countries, and their products, in the form of new remedies, go forth to the pharmacists and from them to the patients. In the schools of pharmacy, assays of plants, microscopic examination of their parts, research in pharmacognosy is the daily work; weeds and herbs, trees with their roots and bark, that nobody noticed nor cared for, are drawn into this sphere, and wonderful properties, formerly unknown, are discovered. As an example, let me mention the well known Cascara Sagrada, the bark of a certain buckthorn, the preparations of which in the shape of fluidextract, pill or tablet, have worked infinite good to suffering mankind. Before the time of pharma-

ceutical research, this plant grew abundantly, as now, in California, but was an unknown shrub that nobody cared for; now, it is a blessing to mankind. And, not satisfied with examining indigenous plants, pharmacy has reached out to other continents, and by her efforts to bring their plants nearer, created a new field for the agriculturist. In the hills of Kentucky, ginseng and hydrastis are now cultivated. Wisconsin and Minnesota produce tons of cultivated mint and other labiates; belladonna and digitalis are now raised on large tracts in California; the fragrant camphor tree, of whose production Japan formerly had a monopoly worth millions, now grows in the swamps of Florida. Daily new medicinal plants are drawn into this scope, and our country with its manifold climates and soil, will soon be independent of the botanical products of Europe, Africa and Asia. Thousands of men are thus employed in the service of pharmacy, from the professor in the schools and the chemist in the pharmaceutical works, to the laborer in factory and field. Here, then, is a profession whose efforts and teachings go back to the people in double blessing,—as a producer of work for thousands and as a reliever of pain and sickness.

The homes of pharmaceutical schools are in most cases small and modest. As a rule, they are private enterprises, supported solely by the tuition of the students. In some of the western states, where the value and merits of pharmacy have been better recognized than in the east, state universities have regularly acknowledged pharmaceutical faculties and the schools are admirably equipped. The students there are on a par with all other students, entering the school with the same preliminary education as those of other professions. In the east and middle west, much remains to be done. Philanthropists have, so far, overlooked pharmacy. With one exception, there was no endowment of any size ever given to schools of pharmacy. Many men have become immensely rich through the products that the humble pharmacists all over the country have sold; but while they give liberally to medicine, law and science, no one ever thinks of pharmacy. This is particularly regrettable in Ohio, Pennsylvania and neighboring states, the states of oil and coal. The pharmaceutical products gained from these two sources are very numerous, and have earned millions for the manufacturers. Would it not be a gracious acknowledgment of the help that the pharamcists have given these wealthy men to endow pharmacy in a suitable manner?

Meanwhile, we pharmacists perform our quiet and humble task. Undaunted by the many difficulties that beset our profession, we continue to do our work in the interest of humanity and civilization, aiding the weak and afflicted, extending the scope of our usefulness and adding our share to that noblest aim of all knowledge and science, the betterment and uplifting of mankind.