

dered gum. In our experiments we found that the powdered tragacanth, dried over calcium chloride at room temperature, produced a mucilage which showed a decrease in viscosity from 333 (tragacanth containing moisture) to 63. This enormous decrease in viscosity makes it imperative that powdered tragacanth should be stored with provision to avoid loss of moisture.

In attempting to arrive at the cause of the above changes which take place in tragacanth when it is subjected to heat, we found the following interesting facts:

TABLE IV.

Powdered tragacanth samples.	Moisture content (dried over CaCl ₂ for 6 weeks), %.	Total volatile matter (100° C. for 2 days), %.	% Acid (as acetic acid) in samples dried over CaCl ₂ .	% Acid (as acetic acid) dried at 100° C.	% Acid (as acetic acid) in normal powdered tragacanth.
1.	8.0	13.0	1.16	1.60	0.65
2.	10.8	13.3	1.24	1.63	0.79
3.	8.9	13.8	1.33	1.60	0.60
4.	12.8	14.0	1.10	1.40	0.70
5.	8.8	11.5	1.08	1.52	0.48
6.	13.0	14.9	1.44	1.33	0.60

A development of acidity takes place when tragacanth is deprived of its moisture and a further increase in acidity occurs upon heating the powdered tragacanth at 100° C. This fact not only indicates a physical change, but a chemical change as well, when tragacanth is subjected to heat.

SUMMARY.

1. In the preparation of mucilage of tragacanth, one- and two-minute boiling periods produce an initial maximum viscosity, which increases greatly upon aging.
 2. Mucilage made by subjection to three-minute boiling period produces a mucilage of high viscosity, yet aging does not materially effect a change in viscosity.
 3. Prolonged boiling decreases the viscosity of the mucilage to a great degree.
 4. Heat has a deleterious effect on powdered tragacanth.
 5. Loss of moisture seriously impairs the powdered gum.
 6. A chemical change occurs when powdered tragacanth is subjected to heat.
- The investigation is being continued.

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REMINISCENCES OF EARLY PHARMACY IN BALTIMORE.

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Fifty years ago when I was graduated from the Maryland College of Pharmacy several of the older reputable druggists of Baltimore, acquainted with my creditable student record, were concerned sufficiently to seek and offer positions in their stores, a fact convincing me even then that college standing, like virtue, has its reward. However, being satisfied with the clerkship already held for a couple of years, at Laroque's, 20 W. Baltimore St. (old number), which granted the privilege of assisting Professor Simon at the College, it was believed best not to make a change until I was considered equal to assuming business on my own account—that which was the ultimate aim for a suitable living revenue.

On entering the institution, autumn of 1877, I found many echoes of that

year's graduating class still lingering, especially in the minds of a few left-overs ever anxious to impress their own wisdom upon the fancied unsophisticated newer matriculant, but soon concluded that none enjoyed more unstinted praise than the highest honor man, Henry P. Hynson, who later was to attain deservedly much pharmaceutical distinction, and then gave the surprise—of intending to clerk indefinitely in the drug store of Charles R. Pue, Baltimore and Stricker Sts., where he already had acquired much valuable experience. Months quickly glided by until the end of my first session when a new crop of graduates, class of 1878, came into view. As the entire student body in those days attended together all lectures (each year's course being simply a repetition of the other) unrestricted opportunity was given for intermingling and forming friendships irrespective of class identity which made it easy for one of discernment to assign aright individual appraisal. Consequently, of that graduating class I recall two strikingly matured manly characters: Charles H. Riley, the highest honor man, who, after exceptional theoretical and practical training at Andrews and Thompson's well-known pharmacy, Baltimore St., determined to follow the foot-steps of his father (already an esteemed Baltimore physician) by entering the field of medicine, in which, after extensive study at home and abroad, he became a distinguished practitioner of his native city, where even greater heights would have been attained had he enjoyed a longer life; the other, J. Mason Hundley, who, after a long service in the popular pharmacy of N. Hynson Jennings, 90 N. Charles St., where he became thoroughly familiar with pharmaceutical theory and practice, also entered medicine, to which he gave years in mastering its application and technique, only to become early in his career Professor of Gynecology in the University of Maryland, where he continued until his very recent death, November 3, 1928, to discharge duty with marked ability and success.

Throughout the college course I heard much of Baltimore's so-called "fathers of pharmacy," viewed with strong interest portraits of the few that graced the library walls, and examined occasional collections of books donated by one or another in the remote or recent past. But it was not until after graduation, which brought temporary relief from intensive study, that my direct duties permitted calling on and visiting some of those occupying this eminent domain. To me there always has been a kind of halo surrounding men who, like stately oaks, have lived long in spite of numerous devastating storms—just as has the man of success in pharmacy, or in anything, made a direct appeal through the occult or mysterious route often encountered in the pursuit. So to my then youthful eyes all such seemed masters of the way they trod, real giants, who in making their lives stand for something had made something upon which to stand, the veritable *sine qua non* of existence from the viewpoint of the ambitious young and not infrequently of experienced elders. It was therefore little wonder that I was interested in these fathers who had struggled so persistently to uplift themselves as well as their calling and now had reached, or were nearing, the passing over to others of their partly finished task.

It came to pass that the '80's found me in business, a conservative competitor, whereby many of these gentlemen were to be met on intimate terms and together counsel taken through organizations and otherwise in solving a few of the many then perplexing problems. Some were seen at the regular monthly college meetings, others at places of business or homes, when the hour spent seemed never amiss,

as the visitor and visited felt amply satisfied with the non-frothy mixture served—of old and new. Indeed, they recited, now and then, memories of even an earlier generation, including individuals, lost save in acts and deeds, that had meant so much for local betterment of the pharmaceutic art, for that it merely was then, so little science being involved.

It was a pleasure for some of them to remind you that: Baltimore was just 150 years old, having been laid out and incorporated in 1730, when it had scarcely a dozen houses and a hundred souls, but an abundance of iron ore from which in the beginning it received the chief impetus in trade and population; that its first drug store was established by Dr. William Lyon, 1746, at Baltimore and Calvert Sts., and its second by Dr. John Boyd, twenty years later, 1767, even though in those two decades the town had increased to 350 houses, 3500 inhabitants, and 10 physicians; that virtually there were no druggists then, nor need of drug stores—these, so-called, being run by doctors in connection with their practice, and having an apologetic armamentarium—few chemicals, galenicals, Indian remedies (plant-roots, barks, etc.), dye stuffs and sick-room supplies, but no sundries or proprietary nostrums—the first of these, in America, being “Antibilious Pills,” patented in 1796, only to be followed by legions shortly thereafter. On the other hand there was much sickness as evidenced by the *pro rata* of physicians, who were kept continually busy treating common ailments as well as frequent prolonged epidemics of bilious, remittent, scarlet, spotted, typhus, yellow fevers, small-pox, cholera, dysentery, measles, mumps, etc., through the intervention of bleeding, cupping, rubbing, vaccination, iron, calomel, blue mass, blue ointment, ipecac, tonics, cinchona and dogwood infusions, etc.

But as a fact, in their conversations nothing ever eclipsed in interest and significance their account of the early contribution to pharmacy by several families of French refugees, who, along with 1000 whites and 500 blacks, escaping the San Domingo massacre of 1793, sought and accepted Baltimore as a haven of safety. Napoleon after receiving his lieutenancy, 1785, did not hold in abeyance for long his mighty ambition towards war and conquest, causing all France to be apprehensive, and many, in and out of the army, to venture “Hands across the Sea” to sympathetic and democratic America. Some simply escaped to the French colonies, San Domingo, etc., only later, when encountering revolutions and massacres, such as that of 1793, to be compelled, wherever possible, to seek our own more peaceful land. Such a sudden influx here of foreigners—of which our other important seaports, Philadelphia, New York, Boston, shared similar experience—was soon assimilated in various lines of trade and art, which reflected at once a visible touch of excellence and superiority.

Edme (Edmund) Ducatel.—Of the San Domingo refugees of 1793, this young man happened to be a well-trained pharmacist, for he had enjoyed several years at the École de Paris and an equal period in a drug store where chemicals were prepared and prescriptions compounded *a la mode*, and fortunately had sufficient means to establish himself in business. This he did in 1796, as chemist and druggist, at 26 W. Baltimore St., third door west of Harrison, where, through adherence to scientific methods and ethical practices, he held for 40 years the unabated confidence of physicians and patrons, thereby giving to pharmacy in our city its true birth, he being its real father. By admitting a son as partner, 1818, the firm's name be-

came: "Edme Ducatel and Son," and shortly thereafter a second son, Jules Timoleon (1796-1849) made it "Edme Ducatel and Sons." However, the latter with a scientific bent, finding store duties uncongenial, hastened to the University of Paris to specialize in chemistry, geology, physics, botany and after a stay of six years returned to our city, only to be sought by institutions of learning and to become Professor of Chemistry and Geology in the University of Maryland, which he served many years with satisfaction and distinction, dying at the age of 52, his father having preceded him by some years, as had also the most reputable business (1834). Edme Ducatel was of small stature, dark complexion, quick in movement and speech (French), and usually was observed with some sort of flower between his lips, so that in the interruption by trade of its analysis, moisture could be supplied. He was an experienced botanist—a man most helpful to the sons of fellow refugees and to many other deserving young men who sought positions in his store, only later to become physicians or self-established pharmacists that brought professional and commercial dignity to their several communities.

In my research I find this reference (1859) by Dr. William S. Love, a highly respected physician of our city in the long ago. "In the year 1826, the late Robert Oliver, Esq., of Baltimore, called at the drug store of the late Edme Ducatel and Son (in which establishment I was an assistant), requesting a plaster for his back, suffering severely from rheumatism. I prepared one which gave prompt and lasting relief. Sometime, subsequently, Mr. Oliver called to thank me and tendered five dollars, which was refused, but gave permission to use his name in connection with the plaster."

Hyppolite Ducatel, the last male member of the family, passed away in 1857, while two sisters, Joanna and Polymnia, survived beyond—one until 1875.

John Michel Laroque (1788-1864).—When the Laroque family escaped the San Domingo insurrection and reached Baltimore, 1793, this then child, was rounding out his fifth year. After knowing his French and going through our city parochial schools with a fair knowledge of English, always spoken with accent, he was accepted in Ducatel's store, where he remained some years, becoming thoroughly equipped in the science and art of pharmacy. In 1817 he established his own business, at 20 W. Baltimore St., 3rd door east of Ducatel's, and at once entered largely, much to the disapproval of physicians, into the manufacture of proprietary medicines: Antibilious Bitters, Antibilious Pills, Elixir of Calisaya Bark, Florida Water, Salves, etc.,—remedies that seemed needed by those of mediocre means. Two years later, 1819, the firm became "Laroque & Milhau" and continued until 1827, when, by the retirement of Mr. Milhau, it reverted to the original. Mr. Laroque was of short stature, somewhat heavy set, dark complexion, smooth face with the eccentricity of wearing his "stove-pipe" hat—behind as well as in front of the counter. His son, (John Phillip) Émile, 1820-1871, succeeded to the business, which after his death, owing to the minority of the sons, Émile and Regis, passed into hands of strangers, and after the fire, 1904, out of existence.

John F. Milhau (1796-1874).—This family also was among the San Domingo refugees that reached Baltimore in 1793—the father having been born in France, 1762. This son was born in Baltimore, 1796, and, after elementary training in parochial and city schools was sent to Emmittsburg Seminary, from where he entered Ducatel's Drug Store for several years—until the death of his father and

the needs of the mother enforced a revenue beyond that of a clerkship. He established himself, 1816, at 3 W. Baltimore St., which was abandoned two years later in order to become partner of Mr. Laroque, under the name, "Laroque and Milhau," which continued until 1827, when Mr. Milhau withdrew and moved to New York, where, after several years of foreign study and travel, he established a business, Broadway and Maiden Lane, much after lines of his former Baltimore connection, and in due time acquired an enviable name and trade. Mr. Milhau was of the larger type Frenchman, roundish face, dark complexion, beard and moustache, with genial, courtly manners. He married Miss Guillau, Philadelphia, 1828, daughter of one of the original French refugee families which settled in that city.

Nicholas Monsarrat.—This gentleman, a refugee of 1793, after equipping himself at Ducatel's as a druggist, became apothecary, 1819, to the Baltimore General Dispensary, a position retained for several years—until the establishment of his own business, 1827, on W. Baltimore St. (58; 150; 142; 174), near Light, thereby at that early period serving the locality that later fell into the hands of Messrs. Coleman & Rogers. Only fragmentary data remain of his career—chiefly the evidence of his cousin, Oscar Monsarrat, who was literally brought up in that store under very rigid discipline and exacting methods.

Oscar Monsarrat (1813–1887).—This gentleman the writer remembers very distinctly, having visited him several times at his store, 113 S. Broadway, where he was always so pleased to meet friends. Having lost his father, a sea-captain, when 14 years of age, he shortly thereafter took a position in his cousin's store, only to spend continuously the remainder of his life, 60 years, in the retail drug business. He was of moderate stature, with dark complexion, hair and moustache, taciturn, easy manners. Some documents also spell the name—Monsurat and Monsurratt. His store was most unpretentious—simply drugs, without the slightest innovation of side-lines.

Elias Durand (1793–1873).—This gentleman was a native of France, who, after serving in her army under Napoleon, emigrated to this country, locating at first in New York, then Philadelphia, next Baltimore and finally Philadelphia where he lived and died, after conducting a retail drug store for many years. While in Baltimore, in his early try-out of cities for final selection, he was employed at Ducatel's—then in the eyes of Frenchmen, in fact, many other citizens—the only real drug store here. He was not only a fine chemist, but an unusual botanist; he devoted much time and study to botany, especially to the classification of indigenous plants. He was, at one period, a Vice-President of the Philadelphia College of Pharmacy and contributed many monographs to the *American Journal of Pharmacy*.

Irrespective of the border city chosen, many of these French refugees knew, visited and maintained a sympathetic interest in one another. All were Catholics—plain, capable, industrious, living within their lingual circle, and seldom marrying into other blood. They visited Europe occasionally, also friends in neighboring cities, but their lives meant a service to business, family and religion. Durand, Laroque and Milhau were names highly respected in France, as members of each had filled, with credit, public positions of honor and trust. Even though these Frenchmen once largely influenced pharmacy in our city, only one family—Laroque—survives to this fourth generation, one member being a prosperous druggist in

a choice residential section, and another a popular physician with family—two sons to perpetuate the name.

Another whose praise these fathers sounded continually, a native product, was Mr. George W. Andrews (1801–1877), who established himself, 1829, at 3 W. Baltimore St., but after 1842 at next door, West, No. 5, diagonally across from Laroque's, stressing the facts: "English and French chemicals, fresh and choice; test-reagents prepared to order; drugs and medicines, etc." He soon became a chemist of repute as well as a prescriptionist who enjoyed the implicit confidence of physicians and the public. Years later, 1857, he associated with him, as partner, his able and long time (18 years) trusted clerk, William Silver Thompson (1822–1894), thereby creating the highly respected firm of "Andrews and Thompson," which survived until recent years. Both men were of sound education with scientific trend, resourceful, accurate, reliable—Andrews becoming author of many technical monographs, President of the AMERICAN PHARMACEUTICAL ASSOCIATION, 1856, member of the Maryland Academy of Science for 55 years, a foremost spirit in founding the Maryland College of Pharmacy (1841), and its efficient initial president, which continued until his death; and Thompson—one of the three in its first graduating class, 1842, and later, editor of *The College Journal and Transactions*, 1858–1862, as well as author of valuable chemical and pharmaceutical literature, and who lived to round out 56 years in the one establishment. Another store of this early period was that founded (1824) by Mr. Thomas G. Mackenzie (1802–1873), N. E. Cor. Baltimore and Gay Sts. After a year the firm's name was changed to "Thomas G. Mackenzie and Co.," and in 1827, at the death of his father, Dr. Colin Mackenzie (1775–1827), to "Mackenzie and Co.," inasmuch as his two brothers, prominent physicians with a following, had a monetary interest. Mr. Mackenzie's educational and social advantage inferred high business ideals, and, as a fact, he always stressed the best in pharmacy, consequently, when in the late thirties (18–) a college to teach its underlying principles was agitated, few worked until its accomplishment with greater loyalty and zeal.

Just beyond that corner, on the west side of Gay St., No. 44, slightly north of Fayette St., was the store of Charles C. Caspari (1815–1871), father of the late Prof. Charles C. Caspari, Jr. (1849–1917), where the latter was born and literally breathed from infancy to manhood a wholesome pharmaceutic atmosphere, as the father, a Ph.D. of Göttingen, in spite of scant English, and that with a decided accent, was highly educated in languages and sciences, well-trained in chemical theory and manipulation, a ready translator and contributor of foreign articles, and a helpful worker in the College of Pharmacy.

At my advent in Baltimore, 1877, all of these early pharmacists, except Thompson and Monsarrat, had gone to their last reward, but their places of business, save Ducatel's, were active under younger management. Baltimore Street still was considered the main retail artery along which was dotted, practically in every block from Caroline to Stricker Sts., a thrifty drug store. Especially were they found, sometimes in pairs, in proximity to the markets, where outlying patrons, even the purveyors themselves, could obtain easily, on stated days, both drug and food supplies. It was not until the '40's that stores began to follow sources of trade by locating on parallel and lateral streets—Fayette, Franklin, Lexington, Saratoga, Pratt, Broadway, Gay, Charles, Howard, Eutaw, Greene, Pennsylvania Ave., etc.,

in order that residential sections might be accommodated all the easier—an innovation that necessarily proved detrimental to some of the Baltimore Street stores.

The first two real elders of pharmacy that impressed me forcibly were Dr. Elisha H. Perkins (1812–1888) and Seth S. Hance (1817–1884), both then about beginning to enjoy the fruits of their labor—in retirement. Each of these gentlemen on the street might readily have occasioned more than passing notice, dressed in conventional black, with stock and silk hat, that of Dr. Perkins being of modern style, that of Mr. Hance having vertical sides and flat brim, he being a Quaker, severely plain, and using consistently *thee* and *thou* in all conversation. His store, 1845–1904, on the north side of Baltimore St., No. 108, between North and Holliday, opposite “The Sun” iron building (the name usually given it then) was a veritable emporium of his own and other proprietary remedies—patent medicines, where most everything in quantity could be found in that line with which the retailer might be supplied at a divided profit. It was, however, a well-equipped drug store without the prescription counter, towards which the trade maintained a friendly attitude and the public a liberal spirit. I went there frequently during clerkship days and although he was usually around, the service was in the hands of his son, Frank, and other skilled assistants. On one occasion while waiting for a package he casually remarked, “I so often used to hear Andrews (Andrews and Thompson—with whom I served my apprenticeship) say, when I can do a business equal to Laroque’s I will be satisfied.”

Dr. Perkins still continued to frequent his store, 1845–1884, N. W. Cor. Baltimore and Greene Sts., where he gladly welcomed friends, but took little part in the service, that being under the direction of William H. Osborn (1835–1881), a wide-awake genial gentleman, popular with both patrons and physicians, and then also Vice-President of the College.

The real active elders of that period, about thirty, may be of interest along with the year each assumed business on his own account—all prior to the Civil War, but continuing through it and into my day and generation: Oscar Monsarrat, '35; J. Brown Baxley, '36; Seth S. Hance, '45; Elisha H. Perkins, '45; James C. Rogers, '45; J. Van Dyke Stewart, '45; John J. Thomsen, '45; William Caspari, '49; Edwin Eareckson, '49; Alpheus P. Sharp, '49; J. Faris Moore, '51; N. Hynson Jennings, '55; Joseph Roberts, '55; Richard Sappington, '55; J. Jacob Smith, '56; William Silver Thompson, '56; John F. Hancock, '57; Louis Dohme, '58; Charles E. Dohme, '60; Henry A. Elliott, '60; Columbus V. Emich, '60; James P. Frames, '60; Adam J. Gosman, '60; Ferdinand Hassencamp, '60; M. Joseph Muth, '60; E. Walton Russell, '60.

They all held membership in the College for which the annual dues, five dollars, went a slight way towards institutional support. I met and talked with them in and out of season so long as they lived but of only three—M. Joseph Muth, Alpheus P. Sharp and J. Brown Baxley—have I preserved accounts pertaining to their early experiences in the drug business. These were written after personal interviews by appointment and submitted later to each for possible correction, so that they constitute virtually their own statements under affidavit. But these must constitute another article.
