

Essence of Peppermint, a History of the Medicine and its Bottle

ABSTRACT

Glass bottles embossed BY THE/KINGS PATENT/ ESSENCE OF/PEPPERMINT have been found on many archaeological sites in North America, including military, fur trade, native, and domestic/commercial sites. Essence of Peppermint was patented in 1762 by John Juniper and became one of several 18th century English patent medicines to continue in production into the 20th century. The history of its production, marketing and distribution, and use is explored, using documentary sources and archaeological material. An attempt is made to identify the type of persons or organizations using the medicine.

Introduction

Square glass vials embossed BY THE/KINGS PATENT/ESSENCE OF/PEPPERMINT have been found on many archaeological sites in North America. These sites ranged over a broad geographical area and included military forts, fur trade posts, Indian burials, and domestic/commercial sites. From the archaeological evidence the bottles seemed to date to the late 18th century and first half of the 19th century. As marked bottles from the period are not particularly common an attempt was made to identify the product and date the Essence of Peppermint vials.

During the search for information it gradually became apparent that the vials and the medicine they contained belonged to a distinct group of 18th century English patent medicines. These medicines, marketed first by an individual or single firm, eventually lost their proprietorial associations and were manufactured and sold by a variety of persons or firms. They became common stock in druggists' and apothecaries' shops. One of the major char-

acteristics of the group was that they were packaged in a distinctive container which was immediately recognizable to consumers. Some of the medicines and their associated packaging, including Essence of Peppermint, continued to be made throughout the 19th century and into the 20th century. The history of several of these medicines, and the group as a whole, appears in the excellent article by Griffenhagen and Young (1959). Without this general background it would have been extremely difficult to fit the many unconnected and fragmentary references to Essence of Peppermint into a coherent study.

In addition to identifying and dating Essence of Peppermint vials, this study has served to highlight certain weaknesses in current research on the material culture of Europeans. Too often efforts are concentrated on the artifact itself: its physical appearance, the technology involved in its production, its maker, its date, and country of origin. In becoming the central point of study, the artifact, by implication, is seen as having a reality of its own, rather than as an object belonging within a cultural milieu. Very seldom is an attempt made to use the artifact to increase the understanding of that cultural milieu and very seldom is recognition made of the fact that the producers were usually not the users.

As Binford (1968:21) has pointed out, every item has a history within a socio-cultural system—the procurement of the raw materials, the manufacture of the item, its use, and final discarding. The artifact has, then, both a production history and a use history. It is important to separate the two, particularly when the artifact is a package and not a product in its own right. Within the context of an industrialized society, a third element has to be added, that of marketing and distribution. The following report has been organized according to the production, marketing and distribution, and use histories of Essence of Peppermint in the hope that the cultural milieu in which it was produced and used will emerge more clearly.

Production History

English Patent Medicines of the 18th Century

Patent medicine and proprietary medicine are terms used to describe drugs and drug combinations that are offered and promoted to the public under a distinctive name and distinctive package (Dukes 1963:8). Although some of this type of medication was actually patented, most of it was not and the two terms are used loosely and interchangeably.

The success of the patent and proprietary medicines lay in several factors, the most important of these being the inadequacies of orthodox medical practices and knowledge. It has been said that 1912 was probably the first year in human history "in which the random patient with a random disease consulting a random physician had a better than 50–50 chance of benefiting by the encounter" (quoted in Dukes 1963:18). In the 17th, 18th, and early 19th centuries there was often a very thin line between the nostrum vendors and the more learned practitioners of the medical trade—the physicians, doctors, barber-surgeons, and apothecaries. The professional practitioners not only prescribed and made up the patent medicines but also were responsible for originating many of them. As Griffenhagen and Young (1959:167) have pointed out:

In the nature of their [patent medicines] composition they were blood brothers of preparations in the various pharmacopoeias and formularies. Indeed, there was much borrowing in both directions. An official formula of one year might blossom out the next in a fancy bottle bearing a proprietor's name. At the same time, the essential recipe of a patent medicine, deprived of its original cognomen and given a Latin name indicative of its composition or therapeutic nature, might suddenly appear in one of the official volumes.

Other factors also contributed to the success of the patent and proprietary medicines. Growing urbanization meant that people had become dependent on professionals, such as apothecaries, and from there it was an easy

step to accept a pre-packaged remedy. In comparison to the costs sometimes involved in consulting a physician or surgeon, patent remedies could be comparatively cheap. The development of printing presses and improvements in transportation made it much easier to reach a wider market. Patent medicine vendors were among the first to understand the importance of advertising and used both broadsheets and newspapers to publicize their wares. In North America, where many people lived in isolated areas far from professional help, where the right plants or compounds might not be available locally, the patent medicines were a logical solution to the problem of sickness. For all those with no knowledge of the preparation of medicines, patent medicines were convenient, and even today there is in existence "a basic and spontaneous undercurrent of public demand for home remedies" (Dukes 1963:13–22, 33–34).

Of the hundreds of English patent and proprietary medicines on the market in the 18th century, most have disappeared. Some of them, however, remained on the market in England, the United States, and Canada even into the 20th century. Among the more famous of those sold in glass bottles were Godfrey's Cordial, Dalby's Carminative, Bateman's Drops, Turlington's Balsam of Life, Steer's Opodeldoc, British Oil, Daffy's Elixir, and Balsam of Honey. The history of these medicines, which is fully described in Griffenhagen and Young (1959), is marked by several similarities. Firstly, they all started as patent or proprietary medicines. Secondly, they became so widely counterfeited that they became public property, standard stock in any type of shop selling medicines and no longer the exclusive property of one person. What they were and the purpose they served was known and commonly recognized. Thirdly, they were sold in distinctively shaped and/or marked containers which were often wrapped in broadsheets describing the many benefits of the medicine. The familiar package undoubtedly contributed significantly to the long

period of popularity enjoyed by the medicines. As the Philadelphia College of Pharmacy report stated, when its members were attempting to standardize the formulas for eight English patent medicines:

We are aware that long custom has so strongly associated the idea of the genuineness of the Patent Medicines, with particular shapes of the vials that contain them, and with certain printed labels, as to render an alteration in them an affair of difficulty. Many who use these preparations would not purchase British oil that was put up in a conical vial, nor Turlington's balsam in a cylindrical one. The stamp of the excise, the king's royal patent, the seal and coat of arms which are to prevent counterfeits, the solemn caution against quacks and imposters, and the certified lists of incredible cures, have not even now lost their influence (*Journal of the Philadelphia College of Pharmacy* 1833:30).

The early patent medicine vendors tried several stratagems in an attempt to protect their proprietary medicines from counterfeiters. Some took out patents which should have secured them exclusive rights for 14 years but did not, in practice, do so (Griffenhagen and Young 1959:158–59, 167). Others advertised extensively, particularly in newspapers (Turner 1965:40–46), exhorting potential customers to beware of imitations. Still others were among the first to recognize the advantages of associating a distinctive package with a product, an advertising technique still used in the 20th century. Without the protection of design and trademark laws, however, the distinctive package, by making the product easily recognizable, made it easy to imitate. As far as the consumer was concerned, the distinctive package was a guarantee of the genuineness of the medicine inside, no matter who had made it or what it contained.

Robert Turlington is a case in point. He had patented his Balsam of Life in 1744 and tried two different bottles before finally settling on his famous angular, pear-shaped bottle with its elaborate embossed inscription. The first shape was square and impressed with a coat of

arms, but in 1749 Turlington complained that the Whitefriars glasshouse was manufacturing his vials. The owners of the glasshouse admitted that "great numbers of bottles have been blown at our glasshouse, of the same shape and size and having the same marks as the bottles, which Mr. Robert Turlington puts his balsam of life into" (quoted in Buckley 1933:235). They excused themselves by saying that they had received orders for the vials. An advertisement in 1752 illustrated a second, more elaborate bottle which resembles one found at Colonial Williamsburg, Virginia (Buckley 1933:235; Noël Hume 1969:43). In 1754 Turlington introduced the shape which was to continue in production for over 150 years. He was forced to make this change "to prevent the Villainy of some Persons, who buying up my empty Bottles, have basely and wickedly put therein a vile spurious Composition" and warns "I would therefore advise all Persons to be very particular where they have it from, and to be well satisfied they are served with the true Balsam" (from broadside reproduced in Ridley 1966:22). He was still troubled by imitators, however, and advertisements for his medicine continued to exhort customers to beware of "notorious Counterfeits" (*The Gazetteer and London Daily Advertiser* 1762:1).

As was noted in the *Journal of the Philadelphia College of Pharmacy* (cited above), not only the distinctive vials were duplicated but also the general appearance of the package. In 1783 Great Britain imposed the first Medicine Stamp Act to raise revenue from all patented medicines and medicines sold by persons other than trained qualified medical practitioners. Although many changes were made in the Act in the 18th and 19th centuries, medicines which had been patented continued to be subject to the tax. The containers always had to be officially marked or "stamped" in some way. Anyone selling the medicines had to ensure that the proper stamps were affixed to the bottle or that the containers were wrapped in appropriately stamped paper (Alpe 1888:9).

So strong was the association between the package and the product that in the United States, from the close of the Revolutionary War until well into the second half of the 19th century, the American versions of the patent medicines were sold stamped with facsimiles of the English government stamp (George Griffenhagen 1980, pers. comm.).

Essence of Peppermint is one of the 18th century English patent medicines which survived into the 20th century. Its history is similar to that of the other English patent medicines—Turlington's Balsam of Life, Dalby's Carminative, Godfrey's Cordial, British Oil, Steer's Opodeldoc—but it also has an individual history which will be dealt with in some detail.

Peppermint and its Uses

Indigenous to England, peppermint, *Mentha piperita* L., was recognized and published as a distinct species in 1696 and was admitted to the *London Pharmacopoeia* in 1721 as *mentha piperitis sapore* (Holmes 1885: 517). In contrast to many plants with medicinal properties, peppermint was not generally used in western Europe until the middle of the 18th century (Syme 1873:10). Commercial cultivation of the plant may have started about 1750 at Mitcham, Surrey, located on the southern outskirts of present-day London. Mitcham was noted for its "physic" gardens which produced lavender, wormwood, camomile, aniseed, rhubarb, liquorice, belladonna, spearmint, pennyroyal, roses, poppies, savine, angelica, and many other medicinal plants from the middle of the 18th century onward (Lysons 1810:254; *Pharmaceutical Journal* 1850–51:116). Acreage in Mitcham devoted to peppermint alone expanded from a few acres in 1750 to at least 150 acres in 1805 and 520–550 acres in 1850, apparently the height of English production of the plant (*Pharmaceutical Journal* 1850–51:298). By the 1860s many of the "physic" gardens around Mitcham had been converted to the produc-

tion of cereal crops, in part because of increasing importation of foreign peppermint and other plants, although in 1864 there were still 219 acres of peppermint around Mitcham (Holmes 1885:517; Warren 1864–65:259).

Cultivation of peppermint in the United States began shortly after 1816 in New York, gradually extended into Ohio, northern Indiana, then to Michigan which eventually became the biggest producer, and finally to the Pacific Northwest (Henkel 1905:7–8; Landing 1969). Other countries which have produced peppermint include Japan, Germany, France, Italy, Russia, China and southern India.

Peppermint is cultivated for the volatile or essential oil obtained by distilling the dried leaves and flowering tips of the plant in water. The oil varies from colorless to a pale yellow liquid and has a "peculiar aromatic odour, . . . burning at first, but afterwards leaving an enduring sensation of cold in the mouth" (Tomlinson 1852–54:384; Parry 1969: I, 198; II, 205). The oil is used in the preparation of peppermint water, spirit of peppermint, and in the production of menthol crystals which are formed when the oil is subjected to low temperatures (Holmes 1885:518).

Peppermint has several uses but is most familiar as a flavoring in baked foods, candies, and medicinal preparations. In the form of peppermint water, which was prepared by diluting the volatile oil in water, it made not only a pleasant drink but was also used as a vehicle for taking unpalatable medicines. For example, castor oil, introduced as a popular purgative towards the end of the 18th century, was often taken "swimming on a glass of water or peppermint water" (Crellin and Scott 1970:134). In his 1851–1852 investigations of street sellers, Mayhew (1968:191) found as many as six persons vending peppermint water from kegs in the streets of London and sometimes steeping unground black pepper or ginger in the beverage to increase the "heat."

Peppermint has medical properties as well, acting as an "aromatic stimulant to allay

nausea, relieve spasmodic pains of the stomach and bowels, expel flatus, or cover the taste or qualify the nauseating or griping effects of other medicines" (Hoerr and Osel 1956:883). In the past it has also been used to relieve headaches, toothaches, and neuralgic and rheumatic conditions (Stillé and Maisch 1879:999). Menthol is an occasional constituent of certain cold remedies.

Essence of peppermint itself is prepared by mixing oil of peppermint with alcohol, the modern proportions being a 10% solution of the oil in alcohol (Hoerr and Osel 1956:883). One 19th century source states that two strengths were made, that sold "in the shops" contained one fluid ounce oil of peppermint to one pint of rectified spirit while the pharmacopoeia version was more than double this strength (Cooley 1970 [1866]:727). The weaker version was colored green by using a little of the herb itself, or parsley or spinach because it was "not conceived to be good by the ignorant unless it has a pale tint of green, which they presume is a proof of its being genuine" (Cooley 1855:276). *The Dictionary of Medical and Surgical Knowledge* . . . (1864:523) also states that peppermint's essential oil "Dissolved in spirits of wine, and stained green with parsley, . . . makes the essence of peppermint, so extensively sold in stamped bottles." It was taken by putting 10 to 30 drops on sugar or mixed in a teacup full of water or in a little wine (Cooley 1970 [1866]:727).

The Patent for Essence of Peppermint

In 1762 the patent for Essence of Peppermint was granted to John Juniper for "A New Medicine called Essence of Peppermint, which contains all the Virtues of that Plant, and is an Excellent Remedy in Cholicks, Retchings, Sickness, and all Disorders arising from flatulency, and in other Disorders therein mentioned" (Great Britain. Patent Office 1856:1). The specifications were brief:

an empyreuma, and collect the oil. The oil thus collected must be purified with alkaline salt put into a retort with it, digesting and distilling with a gentle heat, adding a proper quantity of water for that purpose. The oil being again collected, is to be kept for use. Take of this purified oil of peppermint a sufficient quantity strongly to impregnate a gallon of pure alcohol; put the mixture in a retort, and distill with balneo mariae; to what comes over add the following:—Take two quarts of pure alcohol, extract of common mint two ounces; digest them together in a tall bolt head; when cold, filtre for use.

The Royal Letters Patent gave Juniper, his executors, administrators, and assigns the sole right to prepare, make and vend essence of peppermint for the term of 14 years.

Essence of Peppermint was unlike many other 18th century patent medicines in that it had a relatively simple formula with quite specific and accurate assessment of its usefulness. Complex mixtures with many different ingredients and touted as being efficacious for many different maladies were much more prevalent in the 18th century.

John Juniper

Very few details of Juniper's life and business dealings have been found. For example, it is not known how he came to develop Essence of Peppermint, if he had connections in the Mitcham area, what organization he used for production of the medicine, nor for how long he lived in London. In the patent specifications, he was described as a chemist and apothecary of the Parish of St. Ann, Soho, in the Liberty of the City of Westminster. He was a ratepayer at 12 Macclesfield Street from 1759 to 1770 (K. C. Harrison 1974, pers. comm.). He appears to have marketed, but not patented, Essence of Pennyroyal (Alpe 1888:44; *The Times* 1800:2) which may have been sold in a bottle very similar to Essence of Peppermint (see illustration in Beatson and Co. [1892]:28). Pennyroyal is also a type of mint. At the end of his life Juniper had achieved sufficient fame to be included in the *Gentleman's Magazine* "Obituary of remark-

Distill well-dried peppermint carefully, so as to prevent

able Persons'' where he was described as patentee for essence of peppermint (Urban 1798:1153). He died in Nottingham, aged 76, sometime after 15 November 1798, the day on which his will was written. The executors of the will (on file, Nottingham Record Office) did not take an inventory but swore to the best of their knowledge that the personal estate and effects would not at the time of Juniper's death exceed the value of £999. The sum suggests avoidance of a rate of tax which would have come into effect at £1,000 and, therefore, is unlikely to be a real assessment of the value of Juniper's estate at the time of his death.

Juniper left £20 each to two friends in Nottingham—Thomas Prentice and John Heath—and two friends in London—William Limberry Grosvenor and Thomas Boosey. In June of 1800 John Heath advertised in London that he was the successor to the late Mr. Juniper and sole proprietor of his patented Essence of Peppermint (*The Times* 1800:2). In the same advertisement Thomas Boosey of No. 4 Old Broad Street is listed as an authorized vendor in London. Thomas Boosey was a bookseller from 1792 to 1834 (*London Directories* 1677–1799; 1800–1855). Grosvenor was listed in Kent's London Directory from 1776 onwards as a stationer at 11 Cornhill (*London Directories* 1677–1799). Juniper's business was to be offered for sale to one Higgs of Nottingham for £100 for the goodwill. His household furniture was left to an unidentified Ann Byers, as was the interest to be paid quarterly from the estate which was to be invested by three of the above-named friends. On her death the principal was to be disposed of for the use of the poor belonging to the church in Houndsgate, Nottingham, of which Juniper was a member.

The church was the Sandemanian Chapel (A. J. M. Henstock 1974, pers. comm.), one of the many non-conformist sects of the 18th century. The Reverend John Glas, who was later expelled from the Church of Scotland for his beliefs, developed its tenets in the late

1720s. His most noted convert and prosele-tizer was John Sandeman. Juniper may have belonged to the church during his London years as a Sandemanian chapel was formed in London in April 1761. In Nottingham a chapel was formed in 1768, with an actual building being built in 1778 (Walker 1902:142; *White's Directory* 1832:156). A hint of Juniper's character may be inferred from the tenets of this church. The sect attempted to go back to the beliefs, forms of worship, and restrictions of the early apostolic church, with a congregationalist organization. It was considered scriptural to engage in trade and merchandise or any lawful employment, but the proceeds from these activities were to go to the poor and not to be used to build up treasures on earth. Convinced of the rightness of their beliefs, members of the church would not have any Christian fellowship with those who did not think as they did and, indeed, demanded unanimity in all church actions, excommunicating those who dissented. The church never became numerically large, although branches of it were established in the United States and, after the American Revolution, in Canada (Walker 1902).

Marketing Essence of Peppermint

The only information on the methods used by Juniper to introduce Essence of Peppermint to the London market and to promote its sale nationally and internationally has come from a series of advertisements for the years 1762, 1763 and 1767 published in *The Gazetteer and London Daily Advertiser* (in 1767 called *The Gazetteer and New Daily Advertiser*). The first of these appeared 11 days after the patent date and reads as follows:

By Authority of His Majesty's Royal Letters Patent.
ESSENCE OF PEPPER—MINT.

APPROVED of by several eminent Physicians as an highly useful Family Medicine. Its well-known Virtues are those of speedily relieving Cholicky Pains, and all Disorders arising from Wind or Flatulency, as well in

Infants as in others; by continued Use it agreeably warms the Habit in weak and decayed Constitutions, and in cold and phlegmatic Asthmas and Dropsies, strengthens the Nerves of those that are subject to Palsies, Tremblings, Lowness of Spirits, or hysterical and hypochondrical Complaints; comforts the Stomach in Belchings, Sickness, Loss of Appetite, &c. and in Attacks of the Gout, either there or in other internal Parts has given almost immediate Relief. It may like wise be esteemed a very proper and beneficial Addition to the Mineral Waters in many Cases.

This Essence is no less elegant than useful, will preserve its Virtue for many Years, and not be hurt by Diversity of Climates. The common Dose is only from three to six or eight Drops in a Wine Glass full of pure Water, to which it gives the high yet pleasing Flavour of the Pepper-Mint.

Prepared and sold by J. Juniper, Chymist and Apothecary, in Dean Street, St. Ann's Soho; and is appointed to be sold at Mr. Oldham's, Chymist to his Royal Highness the Duke of York, in the Hay-market; at Mr Churchill's, Chymist, opposite Somerset House in the Strand; and at the Rainbow Coffee House, Cornhill, in Stopper Bottles, at 3 s. and 2 s. each and in small Vials at 1 s. each with which is given a printed Account of its Virtues and Use either in French or English.

Allowance will be made to Captains of Ships and Others that take a Quantity (*The Gazetteer and London Daily Advertiser* 1762:1).

The same or similar advertisements appeared intermittently in this newspaper for the next year. The issues for 1767 were also checked and the only advertisement for that year is relatively brief:

ESSENCE OF PEPPER-MINT

By his Majesty's Royal Letters Patent, Is now well known to give speedy relief to cholicky and gouty pains in the stomach and bowels, in the sea sickness, in reachings from other causes, and in all disorders arising from wind; multitudes of infants as well as others, are daily relieved from its grateful, cordial, and stomatic effects, which are not equaled by any other medicine. Prepared and sold by J. Juniper, chemist and apothecary, in Dean Street, near Gerrard street, Soho, in stopper bottles 3s and vials 1s each, and is by him appointed to be sold by Mr. Oldham, chemist, in the Hay-market; Mr. Churchill, chemist, in the Stand; Mess. Vernor and Charter, book sellers Ludgate-hill; Mr. Wilkie, St. Paul's Church yard, at the Rainbow coffee house, Cornhill; by Mr. Grey, chemist, in Bishopgate street without, near Spital-square; and Mr. Biddle near Whitechapel-bars (*The Gazetteer and New Daily Advertiser* 1767:3).

It is clear from the advertisements that Juniper was selling the medicine in his own shop and had several "authorized" dealers in London. These dealers included other chemists and apothecaries, a circulating library, a book seller, a "chinaman," and the Rainbow Coffee House. The Rainbow Coffee House was described in the 1790–92 *Supplement to the Universal British Directory* as being frequented "by the principal merchants and brokers, &c. in general, but in particular by those concerned in the drug trade" (*The London Directories* 1677–1799). All of these outlets are types that were commonly used for the marketing of patent and proprietary medicines.

The advertisements imply that Juniper was interested in expanding his market beyond London as he offered directions in both French and English, as he noted that the medicine preserved its virtues for many years and in a diversity of climates, as he offered discounts to those taking large quantities and to ship captains, as he stated in some of the advertisements that Essence of Peppermint was available "in many principal Towns in the Country" (*The Gazetteer and London Daily Advertiser* 1763:1) and that it was good for sea sickness.

Essence of Peppermint was not introduced in the distinctive vial. In the 1762–1763 advertisements the medicine was offered in a stopper bottle at 3s and 2s each or in a small vial at 1s each, but in the 1767 advertisement the 2s size was not mentioned. Unlike many other patent medicine vendors advertising in the same newspaper Juniper did not warn his customers to beware of imitations so he does not seem to have experienced immediate difficulties with imitators. Unfortunately London newspapers of the last third of the 18th century have not been available for study, but obviously at some point after 1767 Juniper must have felt the necessity of distinguishing his medicine from other versions being offered and introduced the vial marked BY THE/KINGS PATENT/ESSENCE OF/PEPPER-

MINT (Figure 1). He may have introduced the vial before 1776, the year in which his patent protection ceased. Although the actual date has not been found, it was in use by 1790. An invoice of glassware shipped from Bristol to Philadelphia on the ship *Roebuck* dated 10 November 1790, includes 4 groce Essence Peppermint bottles along with bottles for Daffy's Elixir, small Turlington's, Greenough's Tincture, Jesuit Drops and British Oil (Clifford-Pemberton Papers 1790:Vol. 10, 7).

A distinctive vial had not been sufficient to protect other patent medicines nor is there any reason to suppose that Juniper had any more success in safeguarding his proprietorial rights. By the late 18th and early 19th centuries, Essence of Peppermint was being produced and bottled on both sides of the Atlantic (see Appendix A) and had obviously become public property. The vial did serve another purpose, however. Being a useful remedy and pleasant flavoring, essence of peppermint would have survived without a distinctive package. Indeed, several labelled examples from the 19th century, in standard pharmaceutical vial shapes, have survived (McKearin and Wilson 1978: Fig. 77 #13, Fig. 78 #5; Wilson 1972:150, Fig. 109). The embossed vial, the broadsheet in which it was probably wrapped and the green color of the medicine (see above), however, set the patented version apart and made it a distinct, recognizable product in the consumer's mind, one that was to continue into the early years of the 20th century.

Distribution of Essence of Peppermint

After the early years, the distribution of Essence of Peppermint is traceable primarily through lists, such as newspaper advertisements, invoices (Figure 2), account books, inventories, price lists, and catalogs (Figures 3, 5, 11 and 12) and through the occurrence of the vials in archaeological contexts (Figures

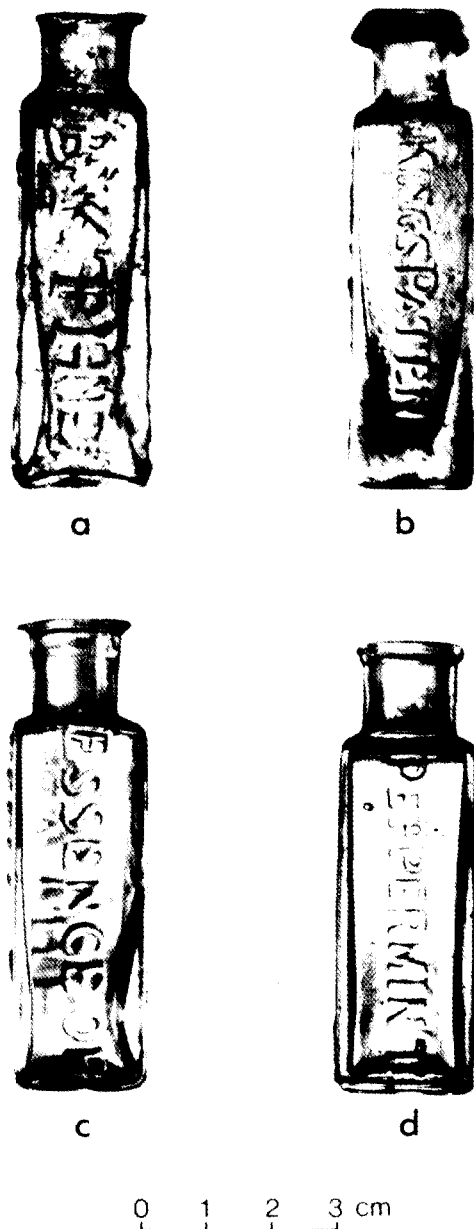


FIGURE 1. Essence of Peppermint vials: a,b, late 18th and first half of the 19th century examples; c,d, second half of the 19th to early 20th century examples.

1771

London January 11. 1771

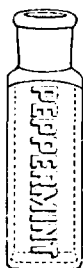
Invoice of sundry Drugs & Voy. Supplies sent aboard ship
Britannia, Nath^l Salomon, Master for Philadelphia on Decem^r 13th
 CM^r from Lieut^{nt} of Ship^s Lieut^{nt} Charles Marshall, Mercantile

1 st	6 doz Boteman's drops	18	12/6	3. 12..	
	4 doz Traumatick oint	12	8.	2. 12..	
	6 doz Radcliffe's pills	16	12.	3. 12..	
	50 doz Scott's pills	14	2/1	22. 10.	
	20 doz British Oil	10	1/1	8. ..	
	6 doz Hony's Worm balm	12	1.	2. 1..	
	6 doz James's Fever powder	12	2/6	6. 10..	
	2 doz Small's bount plaster	4/2	..	2. ..	
	4 doz large do do	4/2	..	1. 12..	
	3 doz Essence of pepper m ^t	9/	..	1. 7..	
	4 doz Wicks's Smit drops	22/8	..	4. 10..	
	2 doz .. Elixuary	22/6	..	2. 5..	
	6 doz	4. 6	50. 15. 6
1 st & 3 rd	9 doz Godfrey's cordial	13/9	4/8	19. 11..	
	4 doz ..	4/6	..	12..	20. 2..
	Charges - 10.				
	Insurance & 24/600 policy paid		1. 11..		
	Shipping Charges		1/11	2. 12..	
				82. 15. 6	

FIGURE 2. Invoice from Dicey Beynon and Company, London to Christopher and Charles Marshall, Philadelphia dated 11 January 1771. This is one of the earliest references to Essence of Peppermint in North America (Courtesy of Henry Francis du Pont Winterthur Museum).

1a, 1c, 7, 8c-g, 9, 10, and 16). While the archaeological examples are generally easy to identify, it has been necessary, for a number of reasons, to develop criteria for distinguishing the patent version from other peppermint products mentioned in these types of documents.

Firstly, in contrast to several other patent medicines, Essence of Peppermint lost its association in North America with its originator. With Turlington's Balsam of Life, Godfrey's Cordial, or Dalby's Carminative the proprietorial names were such an integral part of the medicine that they were often simply



Peppermint

Cap. Pkd. Wt. pkd.,
per gr.
1 oz. . . 5-gr. cs. 15 lbs.

Scale $\frac{1}{2}$ size.

FIGURE 3. Illustration from a Dominion Glass Company catalog dating to the second decade of the 20th century. The 1 oz. capacity appears to be a misprint (copy on file, Public Archives of Canada, courtesy of Domglas Ltd., Montreal).

Patent Medicines and other Vials.

	Per Gross.
Harlem Oils.	\$3 75
Peppermint.	3 75
Turlington's.	3 75
Lemon Acids.	3 75
Bateman's Drops.	4 00
British Oils.	4 00
Genuine Essence and Plain.	4 00
Macassar Oil.	4 50
Dalby's Carminative.	4 50
Godfrey's Cordial.	4 50
Steer's Opodeldoc, L. & S.	4 50
Liquid and Demi Opodeldoc.	4 50
Cephalic Snuffs.	4 50
Balsam Honey.	4 50
Ox Marrows, Round and Square.	4 50
Preston's Salts.	4 50
Flat Bear's Oil and Small do.	4 50
Nerve and Bone Liniment.	4 50
Large Bear's Oil.	4 75
Flat Balsam.	4 75
Cayennes.	4 75
Calcined Magnesia.	4 75

FIGURE 5. Patent Medicine vials in the Green Glassware section of the 1882 catalog of Henry Allen, New York (Allen 1882:246, copy on file, Corning Museum of Glass).

STATISTICAL TABLE

Of the Value of Apothecaries' Glass Ware in the United States; for a period of twenty years, preceding the year 1832.

ARTICLES.	Prices during the entire monopoly by the English Manufacturers, prior to the war.	A decline in Prices, by Foreign and Domestic competition.				A further decline, on the exclusion of the foreign, by the domestic competition.	
		1815, 1817, 1816, 1818.	1819, 1821, 1823, 1820, 1822.	1824, 1826, 1825, 1827.		1828, 1829.	1830, 1831, 1832.
Vials, assorted, - - - - - gro.	\$ 7 00	\$ 3 50	\$ 3 00	\$ 2 50		\$ 2 25	\$ 2 00
Do. $\frac{1}{4}$ and 1 drachm - - - do.	8 00	4 00	3 50	3 00		2 70	2 40
Do. $\frac{1}{4}$ and 1 oz. - - - do.	5 50	3 00	2 50	2 00		1 80	1 60
Do. $1\frac{1}{2}$ and 2 oz. - - - do.	6 00	3 00	2 50	2 25		2 00	1 80
Do. 3 oz. - - - - - do.	6 50	3 00	2 50	2 50		2 25	2 00
Do. 4 oz. - - - - - do.	7 00	4 00	3 25	2 87		2 60	2 30
Do. 6 oz. - - - - - do.	7 50	4 00	3 25	3 25		3 00	2 60
Do. 8 oz. - - - - - do.	8 00	4 00	3 25	3 50		3 30	2 80
Do. Bateman's - - - - - do.	5 50	3 50	3 00	2 25		2 00	1 80
Do. British Oil - - - - - do.	5 50	3 50	3 00	2 25		2 00	1 80
Do. Stoughton's - - - - - do.	5 50	3 50	3 00	2 25		2 00	1 80
Do. Turlington's - - - - - do.	5 50	3 50	3 00	2 25		2 00	1 80
Do. Peppermint - - - - - do.	5 50	3 50	3 00	2 12		1 90	1 70
Do. Godfrey's - - - - - do.	5 50	3 50	3 00	2 62		2 40	2 10
Do. Harlem Oil - - - - - do.	5 50	3 50	3 00	2 00		1 80	1 60
Do. Dalby's - - - - - do.	5 50	3 50	3 00	2 50		2 25	2 00
Do. Opodeldoc - - - - - do.	8 00	5 00	4 50	3 50		3 20	2 60

APPENDIX.

Aggregate of the highest prices, \$ 107 50

Aggregate of the present prices, \$ 34 70

Showing a diminution of more than two-thirds of the original value.

FIGURE 4. A statistical table compiled by Dr. Thomas Dyott of Philadelphia to show the decrease in vial prices from before the War of 1812–14 to the early 1830s. The table is from a circular sent to members of Congress in 1832 by Dyott who wanted a revision of the tariff duties. (Dyott 1833:53, copy on file, American Philosophical Society).

called Turlington's, Godfrey's or Dalby's. Essence of Peppermint, on the other hand, was usually called Peppermints or Essence of Peppermint (Appendix A). In England, however, the association seems to have lingered much longer. John Heath advertised Juniper's Essence of Peppermint (*The Times* 1800:2) as did E. Edwards (*The Times* 1821:4). A bottle mold embossed "Juniper's Peppermint sold by T. [J.?] P. Heath" was ordered engraved by Price and Company of Gateshead in 1812 from the Bewick workshop in Newcastle upon Tyne (Ellison 1975:177). Secondly, peppermint was also sold in both its essence and oil form and as lozenges which were sometimes referred to as "peppermints." The first criterion used to distinguish the patent version was the inclusion, in the document, of other 18th century English patent medicines (Figures 2, 4 and 5). The most frequent companion was Turlington's Balsam of Life. The second criterion was size. Because the patented version was sold in a commonly recognized vial of known volume ($\frac{1}{2}$ ounce) it was sold by the count, such as by the dozen or gross, and not by volume, such as ounces, pounds or gallons.

Essence of Peppermint appeared in North America within a few years of its patent date. In a 1768 advertisement in the *Quebec Gazette* (1768:3) Essence of Peppermint is listed for sale along with knives and sword blades, fabric, beads, jewelry, and a wide assortment of household articles but no mention is made of quantity nor of other medicines of any type. One cannot be sure, therefore, that it was Juniper's patented medicine. A second reference, however, from the *Georgia Gazette* in October 1769 lists Essence of peppermint under "Family medicines" along with at least 11 other patent medicines such as Daffy's Elixir, British Oil, Godfrey's Cordial, Turlington's Balsam (Wilson 1959:111; Rosamund Smith 1978, pers. comm.).

Three other American references for 1771 also undoubtedly refer to Juniper's Essence of Peppermint. The first reference is in the

account books of the firm of Christopher and Charles Marshall, at that time the largest pharmacy in Philadelphia (Griffenhagen 1955:300). The account books for the years 1765 to 1771, which are owned by the Henry Francis du Pont Winterthur Museum, show that the Marshalls were receiving shipments of patent medicines from Cluer Dicey and Co. (later Dicey Beynon and Co.), one of the three big London drug wholesale firms. The shipments for the years 1765, 1766, 1768, 1770, 1771 included British Oil, Bateman's Drops, Godfrey's Cordial (but not Turlington's Balsam of Life as these were coming directly from the Turlington firm), and other patent medicines. Essence of Peppermint appears in these records for the first time in 1771, three dozen at 9s each (Figure 2). Griffenhagen and Young (1959:172) have pointed out that most of the English patent and proprietary medicines sent out to the American market during this period were handled by three major London wholesale firms, Dicey's, Turlington's and Newbery's. With one of these firms handling Essence of Peppermint, it would be assured of at least a chance in the North American market. It is not known if Juniper actually sought a connection with the Dicey firm or if all of these firms began offering currently popular medicines to their customers. It would appear that Dicey's at least started to send the medicine to the American colonies in 1770 or 1771.

The second American reference is the Day-Dunlop pharmaceutical catalog printed in Philadelphia in 1771, which has a page of patent medicines including Essence of Peppermint. This catalog was apparently available for use by other pharmacists in the city and a second copy contains prices in ink for the year 1790 (see Griffenhagen 1955:300). Both these copies are in the library of the American Philosophical Society in Philadelphia.

The third mention of Essence of Peppermint in 1771, and again in conjunction with the Dicey firm, is an advertisement in the *Boston News-*

Letter, 25 April 1771, part of which is quoted below:

The following Patent Medicines Imported in Capt. Davies are directly from the Original Wholesale Warehouse kept by Dicey and Okell in Bow Church, London, are just come to Hand and Warranted Genuine, viz. Turlington's Original Balsam of Life, Bateman's Pectoral Drops, Betton's True and Genuine British Oil, Anderson's Scotch Pills, Hooper's Female Pills, Lockyer's Pills, Godfrey's General Cordial, Walker's Jesuit Drops, Essence of Pepper Mint, Golden Spirits of Scurvy Grass, and Swinsen's Electuary, being a certain safe Medicine for the speedy Cure of the *Stone* and *Gravel*, and is taken without any particular Regimen or Confinement and is now in Great Reputation in London (quoted in Dow 1927:253-4).

There is a gap in the documentary record from 1771 until the late 1780s, but after that date references to Essence of Peppermint continue regularly into the 20th century. The first archaeological evidence for Essence of Peppermint is found on fur trade sites dating to the 1790s. The almost 20 year gap probably does not mean that Essence of Peppermint was not being made or that it was not being imported into North America but only that appropriate documentation has not been found. During the American Revolutionary War, when the English patent medicines were difficult to obtain, it is possible that American apothecaries began making their own versions of English patent medicines. After the war American apothecaries sold both English and domestic versions, although the latter tended to be cheaper. In the 1790s Robert Rantoul, a Beverley, Massachusetts, apothecary, sold the English Essence of Peppermint for 18s per dozen and his own version at 10s 6d per dozen (Griffenhagen and Young 1959:171). Rantoul was still ordering his vials from England, but by the second decade of the 19th century American glass manufacturers were making those as well. By the 1830s in the United States this group of English patent medicines had become generic, made and sold by anyone (Griffenhagen and Young 1959:178).

Canadian connections with the Dicey firm

have not been found and none of the Canadian advertisements containing Essence of Peppermint made any mention of a London wholesaler. As was mentioned above, nothing was found beyond the early advertisements on Juniper's methods of marketing Essence of Peppermint in Britain. In an advertisement in a London newspaper, J. P. Heath of Nottingham, successor to John Juniper, stated that each bottle of his authentic version was "signed by his own hand" (*The Times* 1800:2). He sold Essence of Peppermint in stopper bottles at 2s 6d and vials at 1s 1½d, duty included, but made no mention of the embossed vial. Except for the addition of the scornful denunciation of "counterfeits" the Heath advertisement followed the pattern of those used by Juniper. The virtues of the medicine and its price are followed by a list of authorized dealers in London, including the firm of Francis Newbery. It was probably this Heath who ordered the bottles embossed "Juniper's Peppermint sold by T. [J.] P. Heath" from Price and Company of Gateshead (Ellison 1975:177).

Direct and indirect evidence has been found on the methods used in the distribution of Essence of Peppermint in North America. All of these methods were typical of the general marketing practices in use in the second half of the 18th century or the 19th century. It was common, for example, for ship's captains to assemble cargoes which they expected to sell at other ports and Juniper was evidently interested in selling to these men. Several advertisements containing Essence of Peppermint mention both the captain's and ship's names. Wholesale firms in London, who in this case specialized in medicinal items, filled orders for North American firms. The Marshalls, for example, ordered many of their patent medicines from the Dicey company. The Hudson's Bay Company ordered patent medicines from Evan Edwards' Medicine Warehouse in London from 1834-1875, as well as other suppliers, and these goods were then shipped to trans-shipment points in North

America, such as York Factory or Fort Vancouver, where they were repacked for distribution to inland posts (Lafleche 1979; Lynne Sussman 1980, pers. comm.). Wholesale firms in the major coastal cities of North America, such as Montreal, Quebec, Philadelphia, or Boston obtained goods from Britain and then distributed them to merchants and traders inland. This arrangement depended on an uneasy structure of long-term credit. Arrangements such as this were common for the fur traders operating out of Montreal and Detroit in the late 18th and early 19th centuries (Miquelon 1971:2-5). Country merchants in Lower Canada, like Thomas Cummings at Chippewa near Niagara, operated on a similar system. Cummings dealt with Auldjo, Maitland and Company of Montreal, buying from them, and, in turn, using them as agents to dispose of the flour that he had had to accept as payment for his goods. The final selling price of Cummings' merchandise had to cover "the charges for packing, carterage, river freight, commission, insurance and other expenses at London and Montreal" which added up to 40% to the original cost and to this had to be added "ocean freight, transport from Montreal to La Chine, from La Chine to Kingston, from Kingston to Queenston, and from Queenston to Chippawa, by separate means of conveyance" (Cruikshank 1929:151, 146).

The distribution of Essence of Peppermint in North America, as suggested by both the archaeological and documentary record, was linked to the large urban commercial centers or to four transfer points on major river routes into the continent—Montreal, York Factory in Hudson Bay, St. Louis on the Mississippi River, and Fort Vancouver at the mouth of the Columbia River. The distribution reflects the spheres of influence by British, Canadian, and American commercial and military interests. If one looks at a map (Figure 17), the arc of sites on which Essence of Peppermint was used stretches north and west from Louisiana to Illinois, Nebraska, and Washington. No

sites with Essence of Peppermint were found south of this meandering line, an area largely under Spanish influence in the late 18th and early 19th centuries.

The Essence of Peppermint Vial

The distinctive Essence of Peppermint vial (Figure 1) is square in cross section, with a simply finished lip and embossed lettering on all four sides of the bottle. BY THE/KINGS PATENT/ESSENCE OF/PEPPERMINT. The vial varies from 68.0 mm to slightly over 80.0 mm in height, is generally between 18.0 mm and 22.0 mm square and holds between 11.3 to 19.4 ml which is about ½ fluid ounce, U.S. Height of the lettering varies with BY THE being the largest, followed by ESSENCE OF and PEPPERMINT, and finally by KINGS PATENT. About 65 examples were recorded (Appendix C).

Volume

The volume of the distinctive vial was standard. Eight complete examples held about 14.4 ml (½ U.S. fluid ounce) and in the many fragmented examples all the other measurements, as well as the word spacing, correspond closely to the complete bottles. Only two conflicting pieces of evidence were found. In the Beatson and Company List of Prices ([1867]:16, Figure 91), is a listing for Essence Peppermints for ½ ounce and for 1 ounce. Because the ½ ounce version is illustrated, it is clear that the patented version is being referred to. In a Dominion Glass catalog (n.d.:45; Figure 3) the capacity is listed as 1 ounce but this appears to be a misprint. The original illustration is printed at ½ size which brings the measurements of the vial into the lower measurement range of the complete examples. Also, the company's 1926 mold inventory lists only a ½ ounce mold for Essence of Peppermint.

During the 18th and 19th centuries, vials

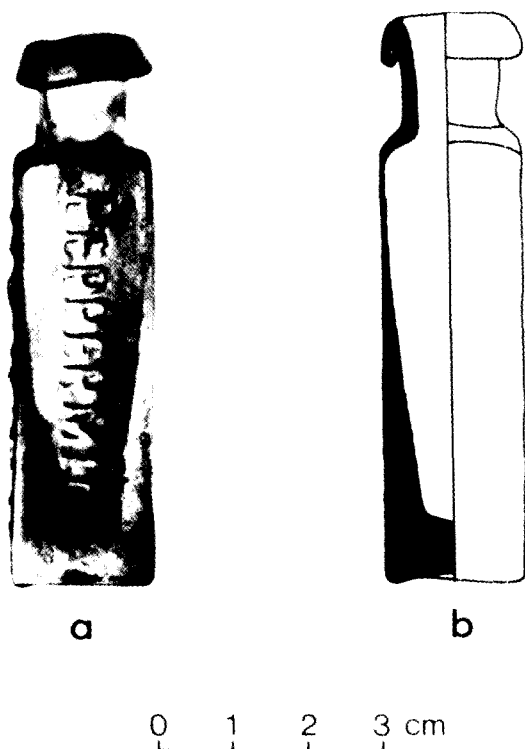


FIGURE 6. A colorless lead glass vial in which the glass at the end of the neck has been folded back on itself to form a protruberant lip unsuitable for forming drops. a, PEPPERMINT side b, Plan and cross section (Rosewarne collection).

holding one ounce or less were used primarily for drop medicines (Crellin and Scott 1970: 150) and this is, of course, how *Essence of Peppermint* was taken. For efficient dropping the angle of the shoulder and neck, the shape of the body, and the shape of the finish are all important. Variations in these components affect the size of the drops and consequently the amount of medicine being taken (Crellin and Scott 1970: 145). While this variation is not as vital with *Essence of Peppermint* as with other medicines such as *laudanum*, it can be serious. The vial in Figure 10 has a well-

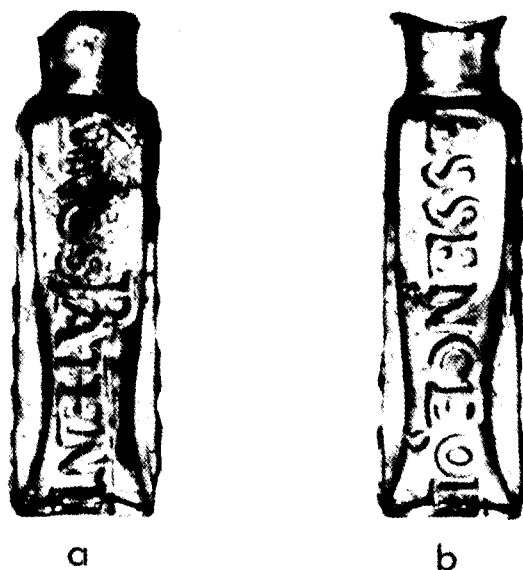


FIGURE 7. a, b, A colorless lead glass vial having taller letters at the beginning of *KINGS* and *PATENT* and having a comma after *ESSENCE*. The finish was simply flanged although virtually none of it remains on this example. The vial was found in a context dating between 1779 and the early 1820s (Jones 1975, Parks Canada collection).

formed finish for dropping as the thin protruding lip provides a good place for the drop to form. The bottle in Figures 1b and 6 has its lip folded inward clumsily and at a very awkward angle so that drops cannot form on its edge. The bottle in Figure 13 has a finish which is too thick and not protruberant enough so that the drop is large and fat, with a tendency to form too quickly and run down the side of the bottle. If the finish is not well formed, it is always possible to hold a finger over the end of the bottle and allow drops to form on the end of the finger.

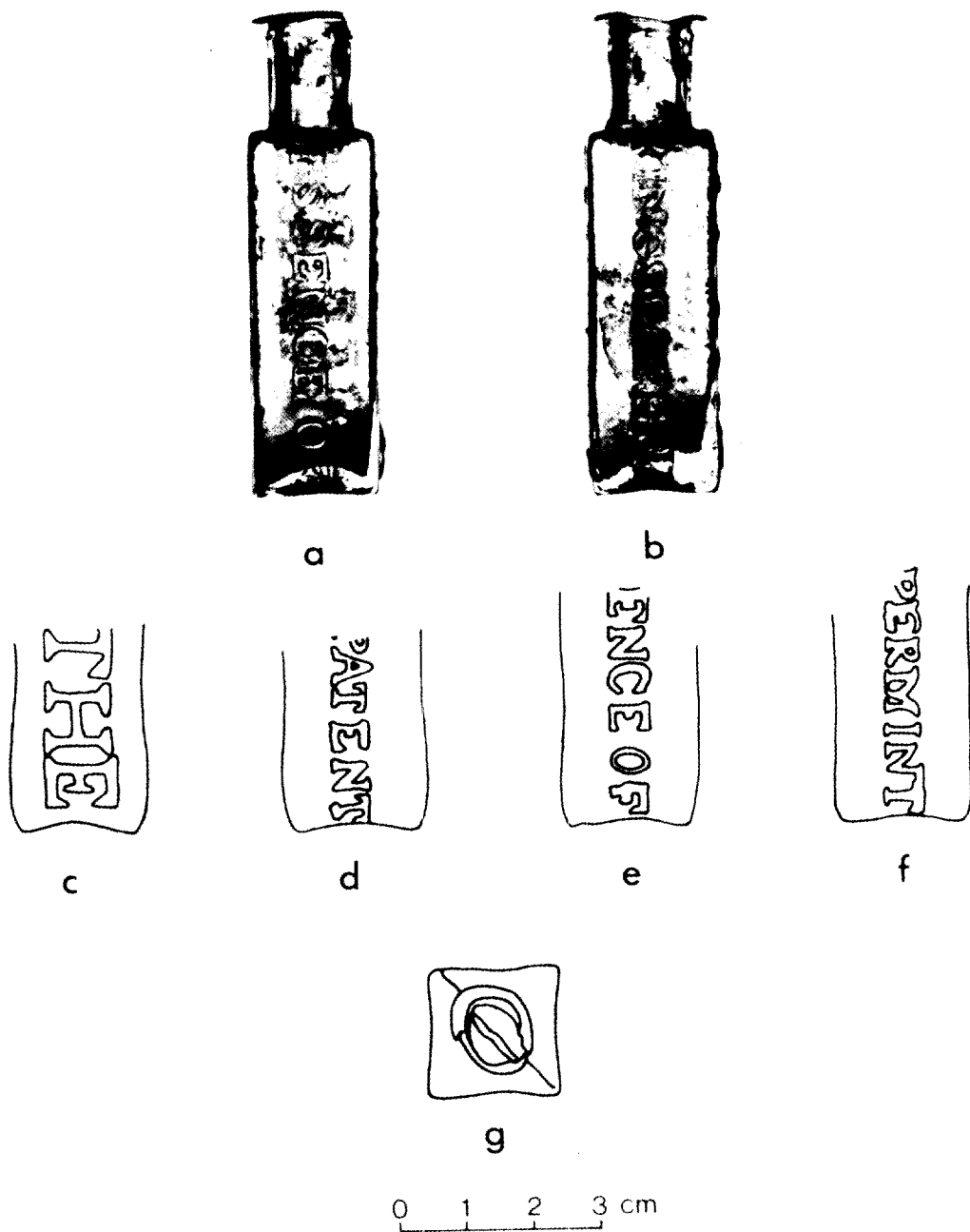


FIGURE 8. Examples of light green, non-lead glass vials believed to be of American manufacture: a, b, note the flanged lip and the slight bulge under the lip which marks the top of the mold; c-f, note the bulge in the lower body, the small lettering on three of the sides, and the arched base; g, note the mold line crossing the base and the ring-shaped pontil mark (Thomson collection; Parks Canada collection).

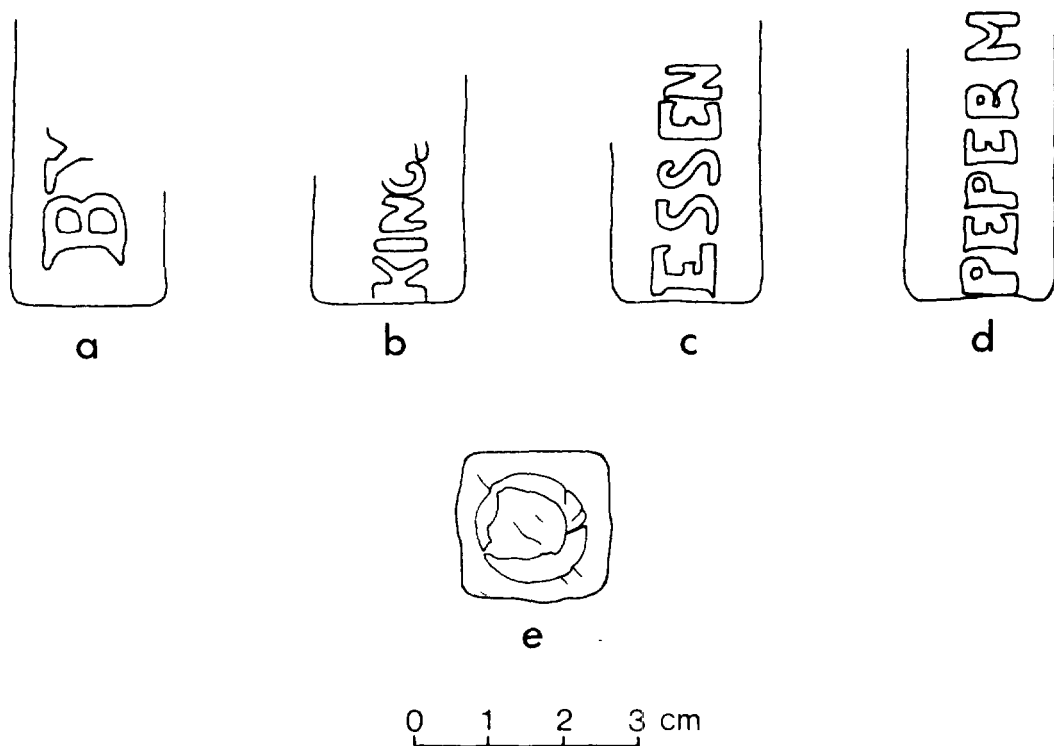


FIGURE 9. a-e. An Essence of Peppermint vial in colorless lead glass in which PEPPERMINT is spelled incorrectly and the lettering begins at the base rather than the shoulder (Parks Canada collection).

Manufacturing Techniques

The Essence of Peppermint vials were made in two different types of molds, depending on the time period of their manufacture. The earliest bottles were blown in a lettered two piece bottle mold that was hinged at the bottom and were held by means of a pontil rod while the neck was finished. Although no mold lines are visible on the body, this mold construction can be inferred from the pair of mold lines visible on the neck and shoulder and by the diagonal line crossing the base (Figures 8g and 9e). The base mold line is often obscured by a pontil mark, either from a plain glass-tipped pontil or from using the blowpipe as a pontil (Jones 1971:68–71). Bot-

tles made in this way could date as late as the 1860s. Only one example, dating to ca. 1850–1870, made in this type of mold was found without a pontil mark. Almost all of the archaeological examples were empontilled and blown in a two piece mold. The finishes were simply formed by tooling glass at the end of the neck into a flange (Figure 8a). Several examples were found in which glass at the end of the neck had been folded back on itself before being flanged (Figure 6). This technique was disappearing by the 1870s although the Whitall Tatum catalog for 1876 still illustrated a lip formed in this way. It was not included in the 1880 catalog.

The later molds had two body parts and a third part for the base. There is no diagonal

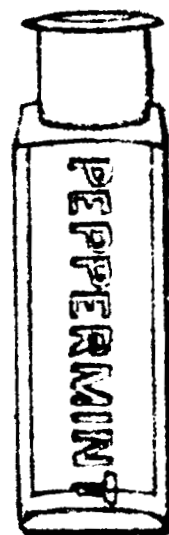


line or pontil mark on the base. These vials could have been made as early as the 1850s and as late as the 1920s. Some of the finishes appear to have been formed by a finish-forming tool (Figures 1d, 13, and 14), a technique introduced in the 1820s but which does not appear to have been used on this type of vial until the second half of the century. In some examples, regardless of the mold construction, the top of the mold has left a horizontal line or bulge on the neck of the vial just below the finish (Figures 8a and 10). No machine-made Essence of Peppermint vials have been found.



0 1 2 3 cm

FIGURE 10. a-d, A colorless, lead glass vial probably manufactured in England. The faint horizontal line near the top of the neck marks the top of the mold (Parks Canada collection).



1294
ESSENCE
OF
PEPPERMINT.

FIGURE 11. Essence of Peppermint illustration from the Maw catalog for 1903 (Maw, Son and Sons 1903:162, copy on file, Pharmaceutical Society of Great Britain).

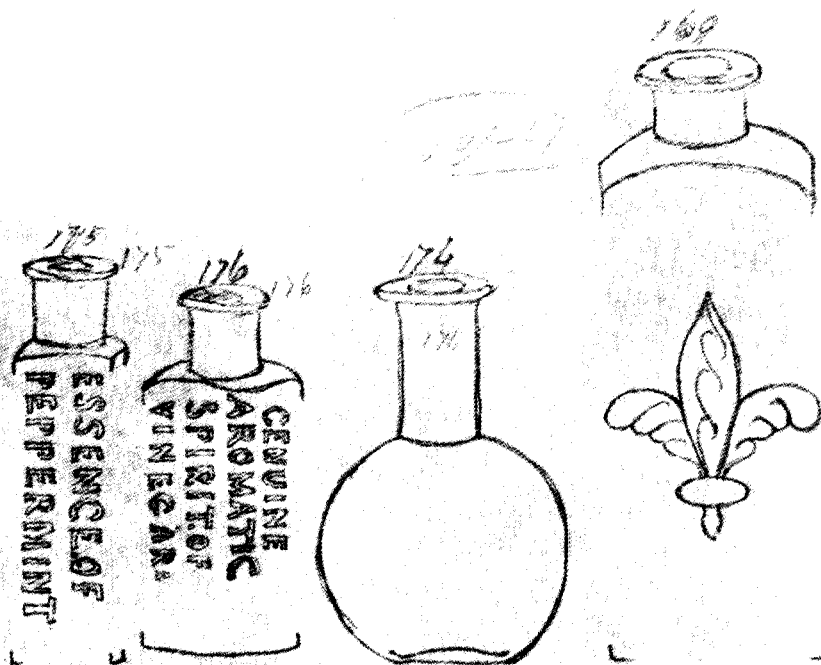


FIGURE 12. Drawing from the Richardson Papers which appears to be showing the words ESSENCE OF PEPPERMINT on one side of the vial (Manuscript on file, Brierley Hill Glass Collection, Dudley Metropolitan Borough).

Glass

The glass in the vials was either colorless or of varying shades of light green and blue green glass. Of the vials available for testing with a short-wave Ultra-violet Mineralight, all those in colorless glass had the distinctive ice-blue fluorescence of lead glass. It should be noted that other types of light green vials, dating to the late 18th and early 19th centuries, have been found in lead glass (Jones 1982). A green color is no guarantee that the glass does not contain significant quantities of lead oxide. If the green vials exhibit a strong "white" or "ice-blue" fluorescence the presence of lead oxide in the glass should be considered.

As far back as the mid 18th century, English glassmakers were producing vials in lead glass, the most firmly dated example being the

1750 Turlington's Balsam of Life bottle excavated at Colonial Williamsburg (Noël Hume 1969:43). It is more difficult to pick out the production of lead glass vials from the documentary sources because the terms "flint" and "white" glass were used for colorless glass. "White" was synonymous for colorless glass while the meaning of the term "flint" changed over time. During the 18th century "flint" seems to have been used commonly, to denote glass containing lead, to signify glass of high quality, or to indicate a heavy glass; but by the last third of the 19th century, "flint" had become synonymous for colorless glass, regardless of its composition or quality. Lead glass production of Essence of Peppermint vials for both Britain and the United States is implied by two references to "flint glass" peppermint vials, the first in the 1794

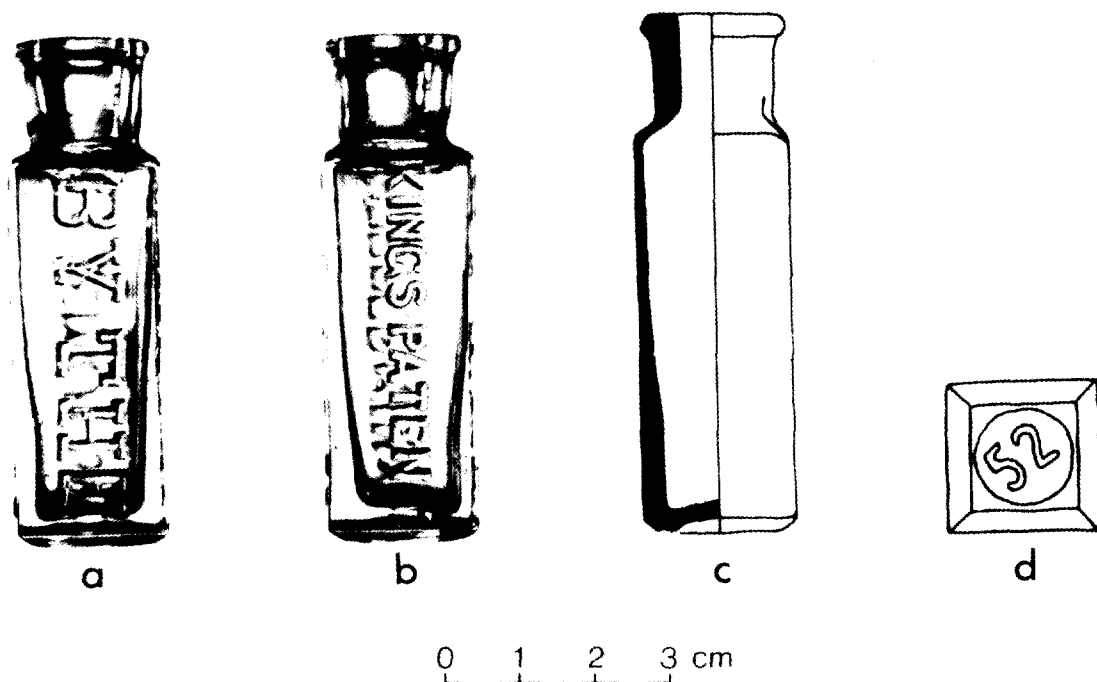


FIGURE 13. a-d, The vial, in green non-lead glass, has the number 52 molded on the base (Thomson collection).

Thomas and George Hawkes price list (*Pottery Gazette* . . . 1895:366) and the second in a ca. 1820 Dyott advertisement (Putnam 1968:24). Both of these references are early enough that they could be referring to lead glass vials.

Production of lead glass vials continued in Britain into the 19th century because of the Excise regulations. For the years 1811 to 1835, and possibly to 1845, these regulations stated that glassmakers in England and Scotland had to produce bottles of less than 6 ounce capacity in lead glass (Great Britain . . . 1835:16). Ireland did not come under this prohibition until 1825 and there was a continual problem with small illegal factories in Britain producing small bottles and other items outside the Excise system. It is possible, therefore, that non-lead bottles of less than 6 ounce capacity

were being made in the British Isles during the first half of the 19th century.

Production of the non-lead green or light green peppermint vials may have started in the United States during the first quarter of the 19th century. Fragments of peppermint vials recovered from the site of the Gloucester Glassworks (ca. 1800–1825) in Clemonton, New Jersey came in aqua and honey-amber glass (Richard Morcom 1971, pers. comm.; Wilson 1968:191–93). It may well be that the drastic reduction in the price of vials in the United States, described in a statistical table by manufacturer Thomas W. Dyott, from before 1812 and up to 1832 (Figure 4) may not just have resulted from American products becoming available and competing with British imports or from a protective tariff; the American glassmakers may have been produc-

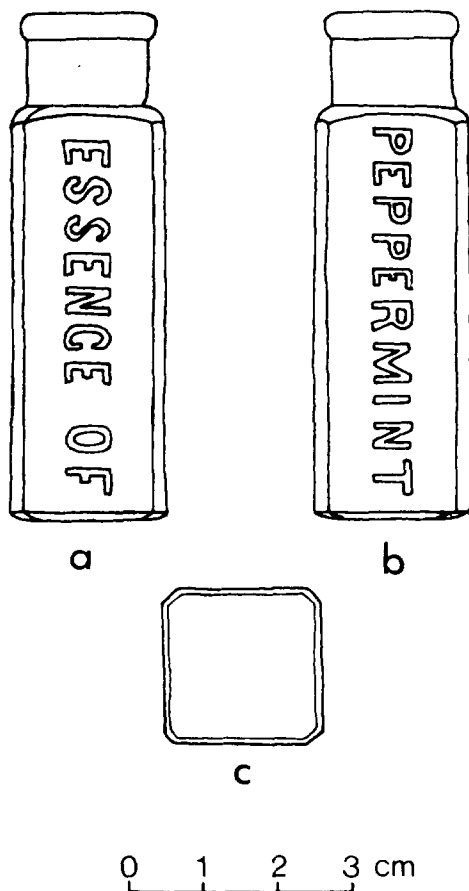


FIGURE 14. a-c, A vial dating to the late 19th or early 20th centuries, in green non-lead glass, has small flat chamfers at the corners of the body. The base is flat, with no pontil mark (National Historic Parks and Sites Branch Reserve Collection).

ing vials in the less expensive non-lead glass. All of the late 19th century American glass catalogs which have been examined included the peppermint vials in the green (non-lead) glass pages (Appendix A).

County of Manufacture

The distinctive Essence of Peppermint vials were first made in Britain. Several entries listed in Appendix A show that the vial was

being made in the 1790s and that it continued to be offered into the 20th century. The Maw firm, a drug and pharmaceutical wholesale supplier located in London, offered the patent medicines in its 1868 catalog but had dropped them by 1882 although PEPPERMINT vials continued to be included. These were still in the 1903 catalog (Figure 11) but had been dropped by 1911 (L. J. Skinner 1976, pers. comm.). Between 1892 and 1916 Beatson & Company of Yorkshire (in 1916 this company had become Beatson, Clark and Company), dropped, with the exception of British Oil, all of the early English patent medicines.

By the second decade of the 19th century, American glass factories were producing Essence of Peppermint vials (McKearin 1970: 44-45). Dr. Thomas W. Dyott, the Philadelphia patent medicine vendor who became so interested in glassmaking that he finally built his own glass factory, described the situation thus:

Owing to the extravagantly high prices of imported Vials, numerous attempts had been made in Philadelphia county, and in the State of New Jersey to establish manufactories, prior to the late war [1812-14]; but they were entirely unsuccessful, owing to a want of experienced artisans, as well as to a general deficiency in the practical knowledge of the business. During the war, I became interested in a factory in New Jersey, which was the first establishment of the kind that continued in operation for any number of years, and which afterwards became the principal school of instruction to the present workmen employed in this business (Dyott 1833:51).

Both the factories that Dyott had had an interest in and the Gloucester Glassworks (Richard Morcom 1971, pers. comm.) produced Essence of Peppermint vials. Dyott also described how two other successful glass factories, which started after his, were forced to close because British manufacturers deliberately "dumped" their goods on the American market after the War of 1812-14, a move designed to put American manufacturers out of business. Dyott, who was trying to convince the members of Congress to raise the

tariffs on imported glassware, pointed out (Figure 4) that prices of empty vials had dropped over two-thirds since before the war (Dyott 1833:53). According to Dyott this reduction in price was the result of American products becoming available, thus competing with British products, and also the result of an American tariff on imported glassware. It has been suggested above that the Americans may also have been using a cheaper type of glass to make their vials.

Throughout the 19th century *Essence of Peppermint* vials continued to be made in the United States but by the early 20th century many of the glassmakers no longer offered them, although they continued to offer Turlington's, Opodeldoc, Godfrey's Cordial, British Oil and other old patent medicines. Even the firm of Whitall Tatum, which had included *Essence of Peppermint* in its Patent Medicine lists since 1876, dropped it between 1897 and 1902. By 1917 they had removed the "Patent Medicine" listing altogether. The Illinois Glass Company (1903) and the Whitney Glassworks (1904) did not include *Essence of Peppermint* in their patent medicine lists, although the Cumberland Glass Company still offered it in 1911. However, the catalog of the latter company illustrates a small square bottle without embossing, while both Turlington's and Liquid Opodeldoc are shown with the lettering. Enough of the vials must still have been made for the glass blowers working with the tank furnaces to include a pay rate for "peppermints" in the wage rates for 1900–1904 (American Flint Glass Workers Union n.d.; 1903; 1904). A typical patent medicine list from a late 19th century catalog is shown in Figure 5. Throughout the second half of the 19th century, the prices for the vials appear to have increased. Whitney Brothers offered them for \$2.25 per gross in 1862; several firms offered them for \$3.75 per gross in the last third of the 19th century; and in 1911 Cumberland charged \$6.25 per gross (see Appendix A).

Production of *Essence of Peppermint* vials

in Canada seems to have started just when manufacturers elsewhere were in the process of abandoning them. Dominion Glass Company, incorporated in 1913, offered peppermint bottles in an early catalog under "Extracts" (Figure 3). Predecessors of this firm, Diamond Flint Glass and Sydenham Glass, had offered patent medicine vials like Turlington's Balsam and Godfrey's Cordial in their catalogs, but not *Essence of Peppermint*. The Dominion Glass Company still owned a ½ ounce hand-operated mold in 1926. The medicine continues to be offered in Canada at the present day but no longer in the distinctive vials (Figure 15c).

The distinctive *Essence of Peppermint* vials were being made in Britain in the 18th century, in the United States and Britain in the 19th and early 20th centuries, and in Canada in the early 20th century. It is quite possible that they were also being made in other countries in Europe and in territories with British colonial associations, although no proof has been found.

Determining the country of manufacture for a particular example is extremely difficult although two suggestions can be offered. The archaeological context, with its association with a known source of supply or allegiances, and the associated artifact material are the best indicators. However, to a limited extent, the type of glass of which the vial is made can be suggestive of an English or an American origin. In the 18th century the vials are likely to be English; in the first half of the 19th century the lead glass vials could be English or American, the non-lead vials are most likely American; and in the last third of the 19th century lead glass vials are most likely to be British while non-lead could be of North American or British manufacture. It should be stressed that this was a tendency, not a hard and fast rule. Using archaeological contexts and glass types it was possible to suggest a country of origin in two instances.

The first case is a group of bottles, similar to those in Figure 8, which appear to be of

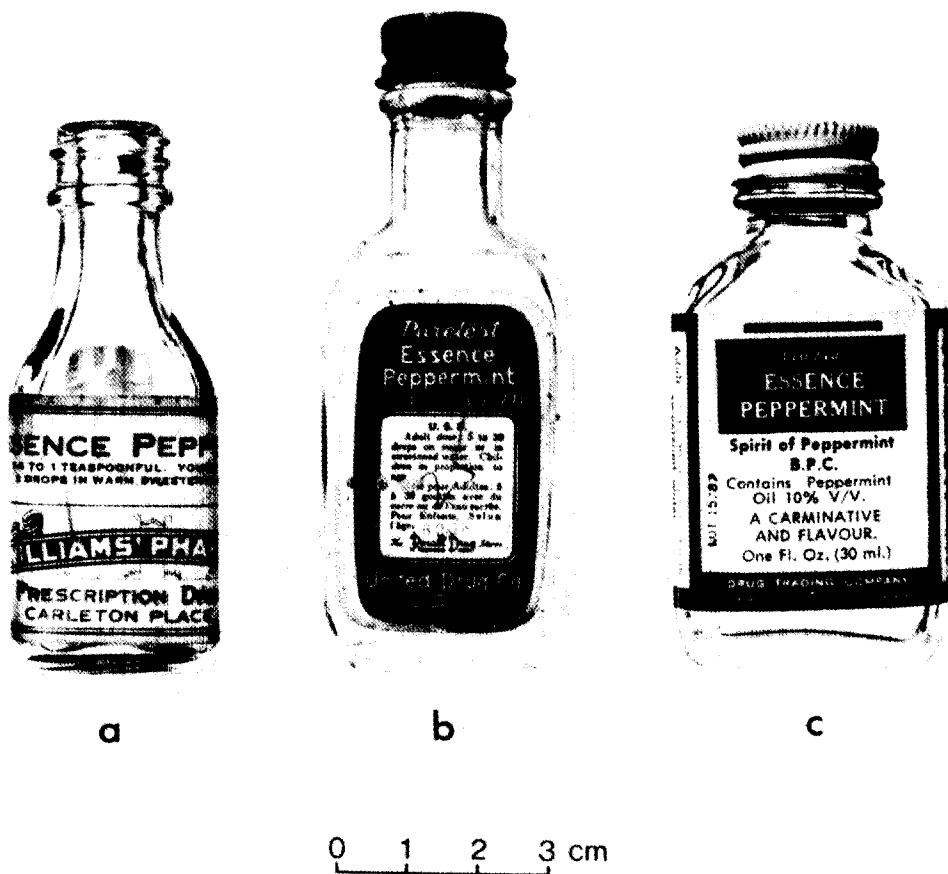


FIGURE 15. Three 20th century vials of common pharmaceutical shapes used to contain Essence of Peppermint: a, vial used by a local druggist in Carleton Place, Ontario, to bottle Essence of Peppermint himself; b, vial used by a manufacturing firm in Toronto, Ontario; c, vial purchased in Ottawa, Ontario in 1971 (Rosewarne collection; Jones collection).

American manufacture. The characteristics which mark this group are a light green or aqua color, non-lead glass composition, generally small but distinct lettering (except for BY THE), a base arched so that the bottle rests on its four corners, a bulge in the lower part of the body, a ring-shaped pontil mark which comes from using the blowpipe as a pontil (Jones 1971:69, 71). Two examples of this type (Figure 8c-g) from Coteau-du-Lac, Quebec, were found in association with several distinctive American products, including proprietary medicines, a figured flask, a

peppersauce, and a perfume bottle (Jones 1975). The context dates to the mid 19th century and may be associated with civilian rather than military activity at the site. The complete but unprovenienced example in Figure 8a-b is typical except that there is slightly less bulging on the lower body than on other examples. Other examples with these characteristics have come from the Bay street Urban Renewal area in Brunswick, Georgia, and from Fort Snelling, Minnesota. Of the 17 Essence of Peppermint vials from Fort Snelling almost all had the distinctive base and

lower body features; all but two were of blue-green or blue glass (Ted Lofstrom 1975, 1977, pers. comm.). The archaeological contexts for this type suggest that they date to the first half of the 19th century and that they are probably of American manufacture.

The second case is a single bottle, illustrated in Figure 10, which has been attributed to English manufacture. The words **KINGS PATENT, ESSENCE** and **PEPPERMINT** have slightly taller capital letters at the beginning of each word. Two mold lines are visible on the neck and go over the resting point to join the edge of a shallow rectangular-shaped concavity in the base. As there is no pontil mark the bottle was probably manufactured after about 1850 (McKearin 1970:107). This example was excavated from a latrine at the Big House in Lower Fort Garry, Manitoba, dating from the 1880s (James V. Chism 1977, pers. comm.) The English attribution has been made on the basis of several factors. The vial has a finish which resembles a peppermint bottle advertised in two illustrated catalogs of the London wholesale firm S. Maw, Son & Thompson (1882) and S. Maw, Son and Sons' (1903). These catalogs contain the illustrations for their quarterly price lists and do not have any explanatory texts. The 1882 example has no caption but the 1903 example, which is the same drawing, is called **ESSENCE OF PEPPERMINT** (Figure 11). The lip is thin and v-shaped, a shape which is not common in this period on North American proprietary medicine bottles (see, for example, Figures 1d, 13, and 14). Also, a covered earthenware "pot" for toothpaste and an earthenware cap for a feeding bottle, both bearing the Maw name, were also recovered from excavations at the Big House at Lower Fort Garry, one of them from the same latrine. Finally, the bottle is made of colorless glass with 27% lead oxide content (John Stewart 1980, pers. comm.) and, as was mentioned previously, North American druggists' catalogs of this period were offering Essence of Peppermint vials in common (non-lead) green glass. For the ab-

reasons it seems reasonable to conclude that this vial was manufactured in England and was probably obtained through the Maw firm.

Identification of Molds

Glass makers obtained molds in several ways. Large establishments sometimes maintained a moldmaking department but most used independent moldmakers or bought the blanks from a brass foundry or iron works and then had the mold cut by engravers (McKearin and Wilson 1978:86, 132, 411; Ellison 1975: 143-45).

Although there is almost no variation in the basic bottle form and very little in the wording, the Essence of Peppermint vials examined do exhibit a number of minor differences due, no doubt, to the long time span the distinctive bottle was in production and to the different factories and molds in which they were made. Some of the variations are common while others are unusual enough to suggest a common origin such as the same region, factory, or mold. Taller capital letters at the beginning of **KINGS PATENT, ESSENCE** and **PEPPERMINT** occur frequently (see Figures 1b,c, 6, 7a, 10). The lack of serifs on the letters, except for **BY THE**, in the late 19th and early 20th century vials seems to be a feature of the period and not a mold oddity (see Figures 1d, 13 and 14). Even the comma between **ESSENCE** and **OF** on the vial illustrated in Figure 7b, is probably not sufficiently unusual that it could be considered a single mold oddity. Several vials had the **M** in peppermint slightly larger, making it into two words (Appendix C). This spelling was found in several advertisements, including Juniper's and occurred frequently enough that no relationship between the bottles can be made, either in terms of date or place of manufacture. This spelling was probably becoming less common by the mid 19th century.

The vial illustrated in Figure 9 has two peculiarities: first, peppermint is misspelled pepermint, and secondly, the wording begins

at the base rather than the shoulder. The orientation is particularly unusual as vertical lettering on most bottles starts at the shoulder. The bottle shown in Figure 9 was recovered from Fort Beauséjour/Cumberland, New Brunswick, in a context dating to between 1776–1779 to 1813 (Herst and Swannack 1970: 13). Other bottles from the same area date to the late 18th or early 19th centuries. Another example was recovered at Artillery Park in Quebec City in a disturbed context which contained both 18th and 19th centuries material (Hélène Deslauriers 1978, pers. comm.). This particular example had a flanged lip which was formed after folding glass in toward the mouth (technique was similar to that used for the vial in Figure 6). Quimby (1966:143; 1960:156) also records a similar bottle from a Potawatomi burial site in Illinois dating from the 1760 to 1820 period. From the illustration it too appears to have a folded-in and flanged lip. A fourth example was recovered from the Tellico Blockhouse site in Tennessee, a site dating from 1794–1807 (Richard Polhemus 1976, pers. comm.; Polhemus 1979:160, 167). This examples does not appear to have a folded lip. It is conceivable that all four bottles if not blown in the same mold, at least had a common origin. Webb (1962:32) mentions finding an Essence of Peppermint vial with one of the p's missing in peppermint but does not indicate the orientation of the lettering, which is the most unusual aspect of the other three examples. This last example was found at the Colfax Ferry site, Louisiana, with material dating from circa 1803–1840.

Two vials, neither with archaeological contexts, were examined which had the number 52 molded on the base (Figure 13). Basal numbers like this were often used by glass companies in the late 19th and 20th centuries to keep track of individual molds, both for inventory control and for customers who ordered bottles by the mold number (Lohman 1972:25–26, 28). Bottles of the same shape but different

volumes would have had different mold numbers. Each company would, of course, have its own system of numbering and probably would maintain the number even if they had to replace a worn out mold. Although the same base number suggests manufacture in the same mold, there were subtle differences in the lettering of these two bottles which suggested they were made in different molds but possibly in the same factory. Another example, Figure 1d, had the number 488 molded on the base.

Within a site context, Ted Lofstrom (1975, pers. comm.) was able to isolate two examples of distinctive molds in the Fort Snelling archaeological collections. In one of these, the mold construction varied from the normal arrangement in which BY THE/KINGS PATENT was cut into one side of a two piece mold while on the other side was cut ESSENCE OF/PEPPERMINT. Two of the Fort Snelling vials had PEPPERMINT/BY THE on one side of the mold and KINGS PATENT/ESSENCE OF on the other. This type of variation would only be significant within a site collection. In the other case there were seven bottles coming from a mold which had a "P" instead of an "R" in PEPPERMINT, the first S in ESSENCE backwards and the last T in both PATENT and PEPPERMINT missing. By carefully comparing fragments with the complete examples, Lofstrom was able to isolate bottles from this mold. These mold oddities are sufficiently unusual that they could be used on a cross-site basis.

Generally, it is extremely difficult to determine if Essence of Peppermint vials, or any of the patent medicine vials, were blown in the same mold, particularly if the researcher cannot view them together. If a mold oddity has been isolated, one also has to consider the spacing, size and general appearance of the lettering and its relationship to the rest of the vial which is difficult to do from verbal descriptions, or even from photographs.

Variants

Occasional archaeological examples or documentary references have been found in which either the wording or the body shape varies from the regular Essence of Peppermint vials. The only shape variation found is illustrated by the vial in Figure 14 in which the corners of the body have been chamfered.

The illustration shown in Figure 12 is one of a collection of loose sheets showing bottle forms, decoration, and size in the Richardson Papers in the Brierley Hill Glass Collection, Dudley Metropolitan Borough, England. None of these sheets are identified as belonging to a specific factory although all are numbered sequentially. It may be that the bottles illustrated were part of the Richardson's production lines. The bottle shown appears to have ESSENCE OF PEPPERMINT embossed on the same side of the bottle. The drawings tend to be somewhat schematic and the lettering may simply have been placed on one side to indicate the type of vial being offered. The vial appears to be drawn life size. No examples of a vial like this are known to have been found on archaeological sites in North America or in private collections.

The fragment in Figure 16 has a tantalizing . . . ERS on the side of the vial that would normally read ESSENCE OF. It is tempting to conclude that the word is Junipers, which would represent the only known example of an Essence of Peppermint vial to be associated with the patentee of the medicine. Ellison (1975:177) reports a mold inscribed "Juniper's Peppermint sold by T. [J.?] P. Heath" cut for Price and Company in 1812 by the Bewick workshop in Newcastle upon Tyne but no examples have been located. Other named versions of Essence of Peppermint were apparently being offered. An 1878 *Druggists' Hand-book of Private Formulas* (Nelson 1878:73) gives a recipe for "Essence of Peppermint, U.S." and "Essence of Peppermint,

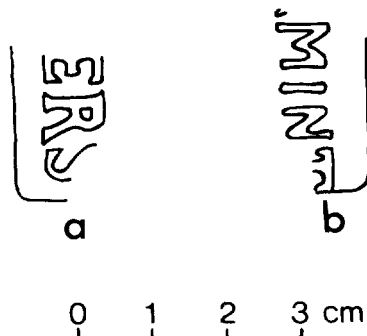


FIGURE 16. a, b, Fragment of a vial with variation in the normal wording. It is too fragmentary to determine the complete word ending in . . . ERS (Parks Canada collection).

Pedlers." Another fragment which appears to have word variations has, on the side which would normally read KINGS PATENT, what may be the word [ROY]AL.

Other variations have been reported. In 1802, Robert Rantoul, a Beverley, Massachusetts, druggist, ordered Essence of Peppermint vials from London stipulating that they should not have "By the King's Patent" molded on the glass (Griffenhagen and Young 1959:173). The sentiment behind the request is obvious. Richard Morcom (1971, pers. comm.) reports finding vials at the Gloucester Glass Works reading ESSENCE/OF PEPPERMINT/MADE BY/KINGS PATENT. At Traveller's Rest, Georgia, a vial was embossed "Essence of Peppermint Patent, and Menthe" (Kelso 1971:21); another at the Rhoads site in Illinois is reported to have been embossed "Esense of Pepermint By the Kings Own Patent" (Walter Klippel 1975, pers. comm.); another from historic Omaha burials in Nebraska is reported as reading BLYTHE/ESSENCE OF/KING SPATEN/PEPPERMINT (Krause 1972:81).

Dating

Because the vials were produced over such a long period of time and generally with so

little variation, dating individual examples is dependent on the archaeological context and on the manufacturing techniques used to make the vial. Some of the variations discussed may be attributable to a narrower time period but definitive information is lacking. Base mold numbers and a lack of serifs on most of the letters would indicate a vial dating generally to the last third of the 19th century or into the 20th century. From the present information, the distinctive vial was introduced sometime between 1767 and 1790 (see above) and continued to be made into the second decade of the 20th century.

The Users of Essence of Peppermint

The commercial documents—newspaper advertisements, invoices, price lists, catalogs—imply a steady market for Essence of Peppermint throughout the 19th century. In North America information on its use has come from archaeological data and from an occasional documentary reference (see Appendix B; Figure 17). Archaeological and documentary evidence place the use of Essence of Peppermint within military, fur trade, native, and commercial/domestic contexts. It would appear that the decision to purchase was sometimes a personal one and sometimes an institutional one.

Military

Five of the eight military sites on which Essence of Peppermint vials have been found were occupied by the British and three by the Americans (Appendix B; Figure 17). In the British army, regulations concerning the procurement of and payment for medicines changed frequently during the 18th and early 19th centuries (Cantlie 1974) although certain basic principles remained constant. Medical personnel such as a surgeon, physician, or apothecary attached to a regiment bought medical supplies for that regiment. Until 1796, when the British government finally began to

pay for medicines and hospitals, medicine and medical care were paid for by stoppages (deductions) from the men's pay (Cantlie 1974:202). Beginning in the 1780s, as the result of some rather flagrant abuses, most of the medical supplies, usually raw drugs and basic medical supplies were to be obtained from a central supply depot although others could be and were obtained locally by the regiment's medical personnel. A printed official list of supplies with entries for 1806 for the General Hospital Depot at Quebec contains only one proprietary medicine, Dr. James' Fever Powder (Carol Whitfield 1975, pers. comm.). Peppermint oil, not essence of peppermint, is on the list. A general requisition of 1843 for the Army Department in Canada is similar. It is difficult to determine, therefore, whether the Essence of Peppermint vials found on these sites would have been the result of local purchases by a regiment's medical personnel or whether they represent purchases made by individuals, probably officers who could presumably have afforded to buy additional medicines when they wished. At both Fort Beauséjour/Cumberland in New Brunswick and Fort Coteau-du-Lac in Quebec, there were long periods of time when these posts were manned by only a small detachment of men which would not likely have included a regimental medical person. Under such circumstances an easily administered, simple remedy like Essence of Peppermint may well have been a logical type of drug or medicine to have with the detachment. Generally the archaeological contexts of these vials do not help identify who would have been using the medicine. Most of these forts were in use for long periods of time and the buildings, if one does have good documentation on their use, tended to be used for a variety of different purposes. There is, therefore, no clear association either with function of a building or with military rank.

The practices of the American military with regard to its medical supplies have not been explored by the author. Thirteen of the 17

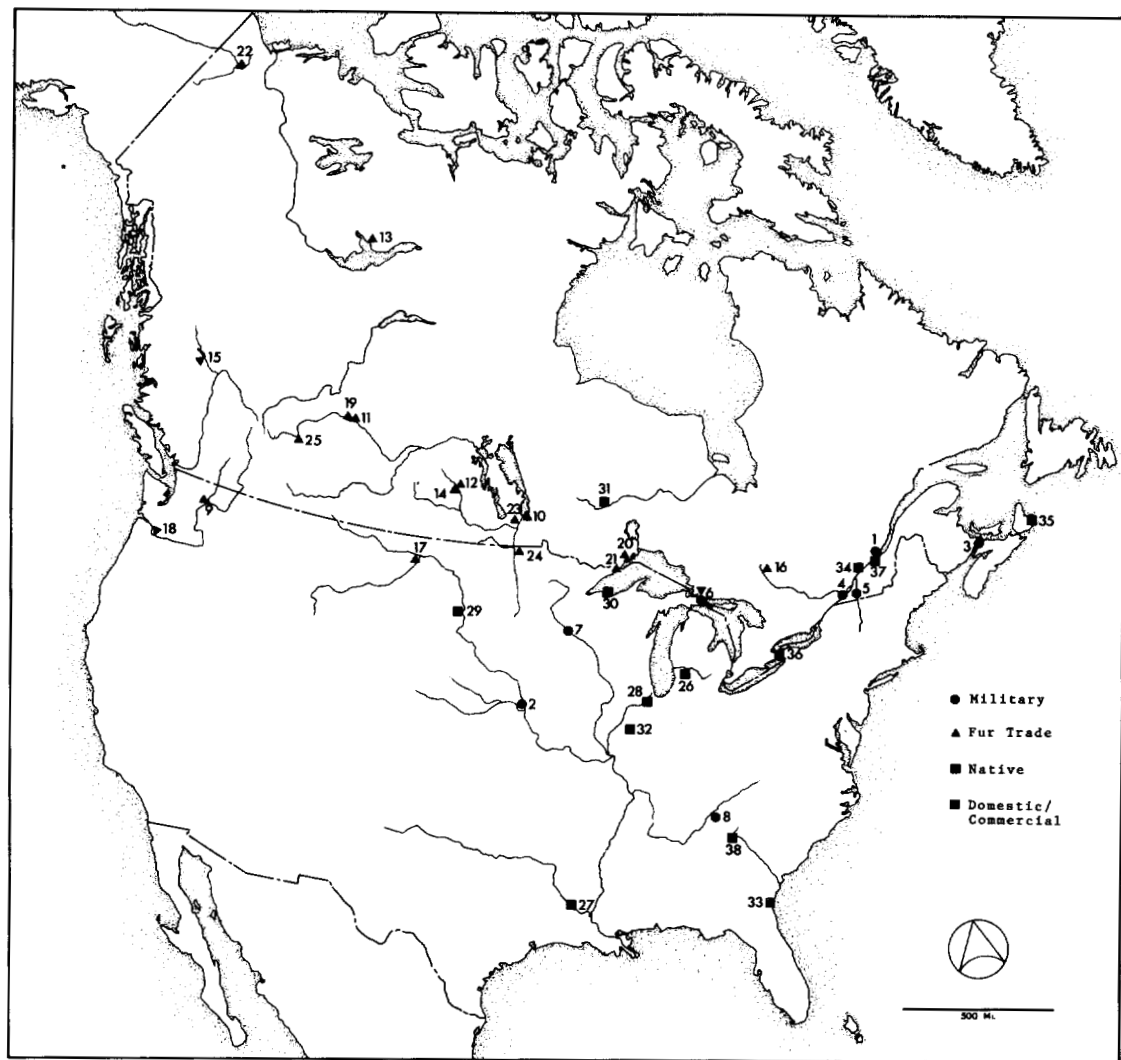


FIGURE 17. Map showing sites listed in Appendix B. Site locations are approximate.

Essence of Peppermint vials from Fort Snelling in Minnesota were associated with or adjacent to the sutler's store which was a combination post exchange, enlisted men's club, grocery, and general store. "The sutler held a monopoly on everything not supplied by the army, but was taxed to support the band, library and the regiment's widows. Among much else, he sold provisions to the

officers and extra clothing to the soldiers" (Minnesota Historical Society n.d.). The other three examples were from officers' latrines (Ted Lofstrom 1975, pers. comm.). Twenty-three examples from Fort Atkinson in Nebraska do not have clear association with either function of the structures or with military rank (Carlson 1979:83–84; 142–43). Of the three examples from the Tellico Blockhouse,

Tennessee, two were recovered from buildings which appear to have been barracks (Polhemus 1979:106–90, 160).

Fur Trade

About 33 examples of Essence of Peppermint vials have been excavated from 18 sites associated with the fur trade. Evidence of its presence has also been found in invoices and inventories (see Appendix A) but references to its actual use are rare. Another English 18th century patent medicine, Turlington's Balsam of Life, has also been frequently found in fur trade contexts.

The North West Company, with its headquarters in Montreal, appears to have been a regular, and early, user of Essence of Peppermint (see Appendix A, B; Fig. 17). On fur trade posts associated with this company, vials occur frequently in archaeological contexts. The sites date from the 1790s to 1821, the year that the company amalgamated with the Hudson's Bay Company. The vials have been found on Hudson's Bay Company sites as well, from sites dating from the 1820s onward. Before 1821 the records of the supplies sent out by the company simply use the general term "medicine." After that date peppermint is mentioned specifically, from 1821–1823 by the pound or dozen, and after 1831 by the dozen. In addition, peppermint and Turlington vials were included in the medical lists between 1824 and 1831 (Krause 1971:1). One possible source of supply for Essence of Peppermint between 1834 and 1875 was Evan Edwards' Patent Medicine warehouse in London (Lafleche 1979). As late as 1884 the medicine was still available at company trading posts (Bishop 1974:192). Starting in the second decade of the 19th century, Essence of Peppermint was also included in the various enterprises of John Jacob Astor, both in the northwest coast trade and in the American Fur Company.

References in the literature to the actual utilization of Essence of Peppermint and to

attitudes towards it are few. Those that have been located will be quoted in full. In 1800 Alexander Henry, working for the North West Company, describes the treatment he gave one of his men while they were at the Park River Post, North Dakota.

Oct. 3rd. . . . One of my men was very ill with a colic. I gave him some essence of peppermint, but it did not cure him; soon after gave him some sweet oil, which he threw up; he was in great pain. I gave him a dose of jalap, which he soon threw up and his pain increased. I then gave him an extraordinary dose of Glauber's salts, which, after some time took its course, but did not appear to relieve him much . . . (Coues 1897:110).

It was not until the 31st of October that Henry was able to report that his sick man was much better (Coues 1897:132). The somewhat rough and ready nature of medical treatment available in the early years of the 19th century, particularly on the frontier, is apparent in the above passage and in the one following.

In 1833, at the American Fur Company's Fort Union Trading Post in North Dakota the medicines are described thus: "Salts, castor oil, & essence of peppermint are our usual specifics and it requires but little skill in administering them: in cases arising from amatory passions the remedies are equally simple" (quoted in Thompson 1968:157–58).

In 1796, J. M. McDonnell, also working for the North West Company at River La Sourie, sent several items to John Evans at a Mandan Village on the Missouri:

Please accept as a Small token of my esteem a few trifles I forward you by Desmarais viz: Two European Magazines & a Guthrie's Geographical Grammar for your amusement, a Powder Horn & Shott Bag, 1 Bottle Turlington's Balsam: 1 Ditto Peppermint, ½ doz. vomits, ½ doz. Punges, 1 Lanut and the Compass you had the bonté to let Mr. McKay have the loan of. You will please return the Books by any favourable opportunity after perusal as they are not my own—(Nasatir 1952:479).

Even men with medical training, like William Tolmie (see below) and John Rae, used Essence of Peppermint. Rae, trained in

Edinburgh, carried the medicine on his 1846–1847 journey into the Arctic (Rich 1976:48; Rae 1953:309).

Within the fur trade and in explorations by fur traders medicines seem to have been part of the official supplies, part of the post's or party's general supplies and not the property of individuals. The medicines seem to have been administered by a senior person and/or by someone with medical training. Occasionally, they may also have been used as trade goods (see below).

Native

Nine examples of Essence of Peppermint vials have been found on seven sites associated with different Indian tribes: Ottawa, Potawatomi, Arikara, Chippewa, Kickapoo, Omaha, and Pascagoula. Only two vials were found in village contexts—at Madeline Island in Wisconsin and at Leavenworth in South Dakota—while the others were found in burials.

Binford (1971:14) has outlined some of the factors which may influence mortuary practices—age, sex, relative social status within a given social unit, and social affiliation in multiple membership units within the society, as well as unusual location, time of year and circumstances of death. Unfortunately, except for the Arikara cemetery at Leavenworth, the burials which contained Essence of Peppermint vials were so badly disturbed that their presence on these sites can be used but no further interpretation can be made. The authors of the Leavenworth report were not able to determine the reasons for inclusions of grave goods in the burials, although they did find that at both this site and at an earlier Arikara cemetery grave goods were commonly found in children's burials (Bass, Evans and Jantz 1971:151–52). The Essence of Peppermint vial at Leavenworth was found in the grave of a five year old child. It has not been possible from the archaeological evidence, therefore, to determine the role

of either the medicine or the vial within a native context in North America.

All the native sites which contained Essence of Peppermint vials were on the St. Lawrence River/Great Lakes system or on the Mississippi/Missouri rivers system. Both these routes were heavily utilized by European fur traders and explorers penetrating into the North American continent. Although the general date ranges of the sites are from ca. 1760 to ca. 1850, the vials can probably be linked to the presence of fur traders in these areas in the late 18th and first three decades of the 19th centuries. Because the archaeological examples were found, with the exception of the Colfax Ferry site in Louisiana, in the northern midwest of the United States, the vials were probably obtained from either the North West Company or the American Fur Company although other small companies and independent traders were also active at the same time in these areas. The traders operating out of Fort St. Joseph in the Straits of Mackinac between 1796 and 1812, for example, may well have been the source of the vials recovered in Michigan and Illinois.

Unfortunately no direct evidence has been found of the mechanism by which the Indians using these sites obtained either the medicines or the vials. In fact, in only one instance was mention made of direct trade of Essence of Peppermint to Indians and that was farther north and much later, in 1884–1885 when the Hudson's Bay Company traded two bottles to the Indians at Osnaburgh House, Ontario (Bishop 1974:192). Documents from both the North West and the Hudson's Bay companies do suggest, however, three general ways in which Indians obtained European medicines.

The first of these was by "gifts" given by the fur trade companies to Indian leaders to enhance their status within the tribal organization, to encourage them to bring more and better furs to the posts and, during periods of intense competition, to foster allegiance to a particular company. Andrew Graham, chief at Fort York on Hudson Bay during the 1770s,

described the elaborate rituals involved in these exchanges. "Medicines" formed part of the gifts.

The captains and several others are doctors, and are taken singly with their wives into a room where they are given a red leather trunk with a few simple medicines such as the powders of sulphur, bark, liquorice, camphorated spirit, white ointment, and basilicon, with a bit of diachylon plaster. The use of everything is explained, and the women are bid to remember, and indeed their memories are very tenacious. A picture is generally put up with the things, for it is held in great reverence and thought to add to the efficacy of the remedies (Graham 1969:320-21).

Alexander Henry, in 1776, described a similar type of "package" given to an Indian which contained an assortment of spices and small prints of the type sold in England for children (Graham 1969:321). It is worth considering that as the Essence of Peppermint vial was probably wrapped in a broadside and that broadside likely contained some pictorial representation, the wrapping may have been considered desirable as well.

Secondly, medicines seem to have formed a small but regular part of the trade with the Indians. As Graham states:

The Factors also quacks medicines with the natives, this business is transacted by the Factors only, always taking care to give them nothing that might hurt them. I myself when Chief of York Fort have traded eight hundred beaver by the above method (Graham 1969: 280).

In the Edmonton House Journals for 1796, mention is made of this type of trade in Saskatchewan:

An Indian has been waiting here two days for medicines for ten beaver but I cannot give him any of those articles he wants I have not received; medicines of late years has been very much curtailed and I do not know for what reason. God knows I have never made a bad use of whatever has been under my hands. Since my first settling Hudsons House there has been upon an average 100 beaver traded yearly for that commodity by me, but this year there will be none (Johnson 1967: 25).

and again in a letter from William Tomison to James Swain (1796):

Several Indians have been at me to trade medicines, but was not able to give them what they wanted, in consequence they must go where these can be served. It is not for want of medicines sent to York that we are so ill served here (Johnson 1967:56)

Thirdly, mention is made of fur traders administering medicines directly to Indians. The somewhat plaintive and righteous tone of the above quotes can be contrasted with David Thompson's more cynical description of his dealings with the Piegan:

Medicines they have few or none, except some simples they use to cure wounds. They are perfectly ignorant of internal applications, and seem to have no medicines for the relief of any inward complaint. Notwithstanding their own ignorance in quackery, they are perpetually begging medicine from us, and place the greatest confidence in whatever we give them, imagining that everything medical which comes from the trader must be a sovereign remedy for all diseases. I have often done wonders by giving them a smell of eau de Luce, as something warranted to cure all kinds of internal maladies. Next morning after drinking they generally swarm into the house for medicine to relieve the effects of the liquor, and we often have some diversion by assuming a solemn countenance, and letting them taste or smell some kind of trash; and the more poignant the application, the greater faith they put in its efficacy (Coues 1897:Vol. 2, 731-32).

Dr. William Tolmie, a trained doctor working for the Hudson's Bay Company further west, had a much more restrained attitude to the administration of medicines to the Indians. At one point Tolmie refused to give an Indian medicine because he was afraid that the Indian would die and that his friends might demand compensation from Tolmie "as is the custom in the interior of the Columbia" (Tolmie 1963: 301). In 1834, while he was at Fort McLoughlin (on Campbell Island in Milbank Sound) he was willing to administer medicines to Indians:

Sat for sometime in his dwelling & gave old Kyeet some Essence of ppt.—he is afflicted with Dysury. Having been requested to bring medicine for him al-

though ignorant of his complaint, took ppt. as being innocuous (Tolmie 1963:294).

When attempting to interpret Essence of Peppermint within a context associated with native North Americans, several considerations have to be kept in mind. First, Essence of Peppermint could represent three different consumer products—the printed broadside in which the vial was probably wrapped (see above), the vial itself, and the medicine. Secondly, each tribe or group would have had different ideas about these products. Finally, the length of time a group had been in contact with the traders and other Europeans would undoubtedly affect their attitudes towards specific products. What had been rare and desirable in the early period of contact may have become commonplace as more and more Europeans moved into an area. In general, however, native North Americans dealing with the fur traders seem to have been favorably disposed towards European medicines, receiving them through ceremonial gift exchanges, through trade, or through medical treatment by fur trade personnel.

Domestic/Commercial

Fourteen examples of Essence of Peppermint have also been found in domestic and commercial sites or contexts (Appendix B; Figure 17). Only one vial is known to have been found in England and that was in the wall of a house. In North America vials have been found on two commercial sites, at least three from a pottery, and one from a house which later became a wayside inn. Several vials were recovered from domestic areas at the Fortress of Louisbourg in Nova Scotia, Quebec City and the Forges du St. Maurice in Quebec, and in Brunswick, Georgia. Finally, Mrs. Simcoe, wife of the first lieutenant-governor of Upper Canada, used Essence of Peppermint on her return voyage to England in 1796. While in the straits of Belle Isle the Simcoes' convoy was threatened by French ships and Mrs. Simcoe,

her children and a servant spent six hours cramped together below decks in the bread room. After this ordeal she was able to rest in a private bunk: "I lay down with an excruciating headache which essence of Peppermint relieved" (Innes 1965:202).

Although archaeological examples are not numerous, successful use by private individuals of Essence of Peppermint probably formed the base for its survival for over 100 years. It seems to have been popular both in the country as well as in the city. In the Carpenter catalogs (1852; 1854), for example, it was included in lists of recommended articles for druggists and for country storekeepers who were just starting in business.

The economic status of individuals buying Essence of Peppermint has not been possible to determine. The prices quoted in Appendix A are from such varied sources that they cannot be meaningfully compared, nor can they, at this time, be translated into relative cost against other medicines or types of medical care.

Summary and Conclusions

Essence of Peppermint is a medicine and flavoring made by mixing specific proportions of peppermint oil in alcohol. Patented by John Juniper in England in 1762, the medicine was sold in a distinctive container introduced sometime between 1767 and 1790 and produced until the second decade of the 20th century. The medicine is still available. The container, a small, square vial usually embossed BY THE/KINGS PATENT/ESSENCE OF/PEPPERMINT was internationally recognized. It was probably wrapped in a broadsheet, and the medicine would have been colored green. When production of the medicine went beyond the control of the original proprietor, the medicine continued to be marketed in the distinctive vial which was made by glass factories in England and in North America. The bottles are datable only by the dates of production for their shape, by

the changes in glass manufacturing techniques, and by their archaeological contexts. Within nine years of the patent, Juniper's market had become international. This market had been opened up by the trade connections, emigration, and military activities of his fellow countrymen or their descendents. To date, evidence of Essence of Peppermint has only been found in England, Canada, and the United States, but it is likely to be found in other parts of the world with British colonial affiliations. In North America the medicine with its associated vial was used by individuals, in or by the British and American military, by fur traders and explorers, and by native North Americans.

The history of Essence of Peppermint is not complete, however. Almost nothing is known of John Juniper, the patentee, or of his production arrangements. The actual date of introduction of the distinctive vial is not known. The extent of the use of the medicine in England is not known. It is not known if Canadian firms during the 1770s dealt with the same wholesale firms in London as did their American counterparts. Many of the vials from archaeological sites came from disturbed or insignificant contexts that could not be used to clarify the use of Essence of Peppermint within certain organizations.

This incompleteness can be attributed to a lack of documentation and to the unexpected complexity of the subject. Certain relevant areas remain almost totally unexplored, such as the alternate bottle forms for Essence of Peppermint, English laws concerning succession duties, the relationships between certain firms in London and North America, comparative pricing between patent medicines and prescribed medicines, and American military medical practices, to name only a few areas of possible research. Essence of Peppermint serves as a reminder that even a product that is relatively uncomplicated and unchanging in itself has a complex and varied history, something that archaeologists of the historic period in North America have a tendency to forget.

An attempt was made, through the organization of this article, to make clear distinctions between production, marketing and distribution, and use. Using this organization, the Essence of Peppermint vial was clearly placed in its position as a package, as part of the marketing process. Its presence in the documentary and archaeological record could then be used to trace the distribution and use of Essence of Peppermint. The organization helped to clarify the meaning of the medicine and its vial within a cultural context. This is particularly important when the producer and user societies are removed from each other, either geographically or culturally. Finally, when using Essence of Peppermint or its vial in other research projects, such as an archaeological site report, those elements which do not contribute to the study being undertaken can be easily differentiated and ignored.

Although production, marketing, and distribution tended to be closely linked to each other, there was little difficulty in distinguishing among the different elements in the history of Essence of Peppermint. Use history was particularly easy to isolate as details of production, knowing who made an object or how it got to where it was being sold, seldom formed the basis of the decision to buy and use a product. Nevertheless, there is one aspect of an artifact which does follow through from production to use, and that is the common understanding between the consumer and the producer of what that artifact is and what it does. In modern terms this can be expressed as marketability, that which makes a product suitable for purchase, whether it be usefulness or fashion.

In the case of Essence of Peppermint, this common understanding can be found in the general background of 18th century patent and proprietary medicines. The inadequacies of contemporary medical practices and knowledge and a long tradition of self-medication combined with the general inability to make one's own medicine, all contributed to the success of patent and proprietary medicines.

By using distinctive packaging to protect their proprietary rights, the medicine vendors created an instantly recognizable product. The familiar package contained a familiar product, the use and efficacy of which was clearly understood by the consumer. The package was such an integral part of this understanding that, in the case of Essence of Peppermint, it remained unchanged for over 120 years, even though parts of it were at complete variance with an existing political system. In the post-revolutionary United States, the vials continued to be embossed KINGS PATENT and continued to be wrapped in paper bearing facsimiles of the official British Stamp Act tax markings. Added to its familiarity, Essence of Peppermint was portable, easily administered, and effective, all attributes useful in the contexts in which it was found in North America.

With transference to a different society altogether, that of the North American Indians, it is much more difficult to interpret the Indians' attitudes towards patent and proprie-

tary medicines. European medicines appeared to have been valued both as medicine and as talismans. The presence of both Essence of Peppermint and Turlington's Balsam of Life vials in Indian burials suggest that in some groups the vials may have had some significance apart from the medicine. It is also possible that with continuing exposure to the two medicines, native North Americans developed the same consumer identification with the package as had other Americans and Canadians.

The history of Essence of Peppermint reveals a highly mobile society with a complex distribution and trading system for dispersal of goods. This was combined with a willingness and technological ability to transport those goods over long distances in relatively short periods of time. Underlying this, however, was a strong element of conservatism in which a package long outlived the political, medical, and social milieu in which it originated.

Appendix A
Evidence for the Production and Marketing of Essence of Peppermint

Form of Citation	Date	Comments	Price	Reference
Essence of Peppermint. JUNIPER'S SPECIFICATION	1762	PATENT. British Patent No. 781, 1762.	—	Great Britain. Patent Office 1856
ESSENCE of PEPPER-MINT	November 1762	“By Authority of His Majesty’s Royal Letters Patent.” Advertisement for Essence of Peppermint. London, England.	Medicine: Stopper bottles at 3s and 2s each; Small vials at 1s each	<i>Gazetteer and London Daily Advertiser</i> 1762:1
ESSENCE of PEPPER-MINT	May 1763	“By His MAJESTY’s Royal Letters Patent” Advertisement for Essence of Peppermint. London, England.	Medicine: Stopper Bottles @ 3s and 2s each; small vials 1s each	<i>Gazetteer and London Daily Advertiser</i> 1763: 1
ESSENCE of PEPPER-MINT	September 1763	“By His MAJESTY’s Royal Letters Patent.” Advertisement for Essence of Peppermint. London, England.	ditto	<i>Gazetteer and London Daily Advertiser</i> 1763: 1
ESSENCE of PEPPERMINT	January 1767	“By his Majesty’s Royal Letters Patent.” Advertisement for Essence of Peppermint.	Medicine: Stopper bottles 3s; vials 1s each	<i>Gazetteer and New Daily Advertiser</i> 1767: 3
Essence of peppermint	June 1768	No other patent medicines included in list. Advertisement in Quebec City newspaper by James Hanna.	—	<i>Quebec Gazette</i> 1768: 3
Essence of pepper-mint	October 1769	Advertisement appearing in <i>The Georgia Gazette</i> including many other English patent medicines.	—	Wilson 1959: 111; Rosamund Smith 1977, pers. comm.
Essence of pep ^r mt	January 1771	(Figure 2) Invoice, Christopher and Charles Marshall Account books, Winterthur Museum, Delaware.	Medicine ? 3 doz. 1/7- per doz. 9/-	—
Essence of Pepper Mint	April 1771	Advertisement appearing in <i>Boston Newsletter</i> . List includes other English patent medicines.	—	Dow 1927: 252–53
Essence of peppermint	1771	Druggist catalogs for Philadelphia, listed in “Patent Medicines.”	—	Day 1771: 30

Essence of peppermint	June 1788	Advertisement by David David of Montreal, Quebec.	—	<i>Montreal Gazette</i> 1768
Essence of peppermint	late 1780s	Account book. American druggist manufacturing his own version of Essence of Peppermint and at the same time offering an English version. Salem, Mass.	Medicine: English 38/-doz. American 10/6 doz.	Griffenhagen and Young 1959: 171
Essence of peppermint	June 1790	Same as 1771 Day catalog with penned prices for 1790. Philadelphia.	Medicine: single 3/6 dozen 22/6	[Day] 1790: 30
Essence Peppermint	November 1790	Invoice for ship <i>Roebuck</i> from Bristol to Philadelphia. Invoice is for bottles and includes bottles for other English patent medicines.	—	Clifford-Pemberton Papers 1790: Vol. 10, 7
[Essence Vials] Peppermints	1794	“Price of Flint Glass by Tho. and Geo. Hawkes, At their Manufactory, Dudley, Worcestershire.” It should be noted that some bottles in this list such as Bateman’s, Daffy’s, and Godfrey’s were offered in “green” glass which may or may not contain a significant quantity of lead oxide.	Vials: per gross 16/-	<i>Pottery Gazette</i> . . . 1895: 366
Essence of Peppermint	September 1797	Advertisement appearing in <i>Columbian Museum & Savannah Advertiser</i> , Savannah, Georgia. Appears under “Patent Medicines.”	—	Wilson 1959: 106; Rosamund Smith 1977, pers. comm.
Essence of Peppermint	June 1798	Advertisement appearing in <i>The Augusta Chronicle and Gazette of the State</i> . Augusta, Georgia.	—	Wilson 1959: 112; Rosamund Smith 1977, pers. comm.
“Essence of Peppermint”	1799	Order for empty vials sent to London by Rantoul, a Beverly, Mass. druggist.	—	Griffenhagen and Young 1959: 171
Essence of Peppermint	June 1800	Advertisement by J. P. Heath for Juniper’s Essence of Peppermint. Heath states that he is the successor to Juniper and warns that each bottle of his genuine medicine is signed by his own hand.	Medicine: Stopper bottles at 2s 9d; phials at 1s 1½ d each	<i>The Times</i> 1800: 2
Essence of Peppermint	November 1800	Advertisement appearing in <i>The Augusta Chronicle and Gazette of the State</i> , Augusta, Georgia. Listed under “Patent Medicines.”	—	Wilson 1959: 112; Rosamund Smith 1977, pers. comm.
Essence of Pepper Mint	December 1800	Advertisement appearing in <i>The Sun</i> , Pittsfield, Mass. “Also, Essence of Pepper Mint, American and English, warranted Genuine, in patent vials by the single, dozen, gross or thousand. Mint Cordial by the Gallon.”	—	Landing 1969: 10, Fig. 10

Form of Citation	Date	Comments	Price	Reference
—	ca. 1800– 1825	At least two examples of the Vials were recovered from the site of the Gloucester Glassworks, Clemonton, New Jersey.	—	Richard Morcom 1971, pers. comm.; Wilson 1968: 191–93
“Essence of Peppermint”	1802	Rantoul of Beverly, Mass. to London: ordered vials which were not to have “by the Kings Patent” molded in the glass. Formula for Essence of Peppermint in formula book. Filled 66 bottles in Dec. 1801, 202 bottles in June, 1803.	—	Griffenhagen and Young 1959: 173
[Essence vials] peppermint	February 1803	“Prices of Glass Goods Sold by the different MANUFACTURERS, in ENGLAND: February 15th, 1803.” List resembles the 1794 Hawkes price list.	Vials: per gross 18/-	Prices of Glass Goods. . . 1803
Ess’ce peppermint	August 1803	Invoice from Auldjo, Maitland & Co., Montreal to Cummings (merchant) near Niagara, Ontario. Other English patent medicines on the list.	Medicine: 2 doz. at 1/12/- at 16/- doz.	Cruikshank 1929: 157
[Essence] of Peppermint	May 1806	Handbill “Fresh Imported Drugs & Medicines” for I. Peck & Co., Burlington. Listed under “Patent Medicines.”	—	Van Rensselaer 1969: 91
“Peppermint”	1807 1808	Order for the Columbia Department, North West Company. Made by David Thompson at Rocky Mountain House No. 1, ordered 24 bottles each year. Also ordered Turlington’s.	—	Dempsey 1973: 35, 40
ESSENCE OF PEPPER-MINT	January 1809	Advertisement appears in <i>Augusta Herald</i> , Augusta, Georgia. “A preparation well known for its virtues in cases of cholic, flatulencies, retching, sickness of the stomach, loss of appetite, etc.”	Medicine: .25 per bottle	Rosamund Smith 1977, pers. comm.
“bottles of peppermint”	May 1811	Thompson of the North West Company, Montana region. Inventory of supplies and goods. Two bottles of Peppermint.	—	quoted in White 1942: 259
Ess. Peppermint	October 1811	Invoice of merchandise shipped by John Jacob Astor for sale and trade on the northwest coast.	Medicine: ½ doz. /75	Porter 1966: I, 504
Juniper’s Peppermint sold by T. B. Heath	March 1812	Account books of Beilby and Bewick, engravers in Newcastle upon Tyne. Mold ordered by Price and Co., glass makers. Mold cost 12/-.	—	Ellison 1975: 177

Essence of Peppermint	October 1814	Advertisement by Samuel David, Montreal, of goods just arrived from London.	—	<i>Montreal Herald</i> 1814: 4
Ess. of Peppermint	January 1815	Account books of Beilby and Bewick, engravers in Newcastle upon Tyne. Mold ordered by Northumberland Glass Co. Mold cost 17/6.	—	Ellison 1975: 173
Essence of Peppermint's	April 12, 1815	"Prices of Flint Glass for Exportation, April 12, 1815." Printed list. Handwritten at bottom: Thos. & Geo. Hawkes, Dudley, H. A. Y. Stater & Co. [Philadelphia.]	Vials: per gross 22s 6d	Prices of Flint Glass . . . 1815
peppermints	June 1815	"2 dozen peppermints" passing through the port at Detroit from Canada. Customs duty assessed at \$1.35.	Medicine: 2 doz. for \$4.50	Landing 1969: 23, 24
Essence of Peppermint	1815	Advertisement in Pittsburgh newspaper by Dr. Thomas Dyott.	—	McKearin 1970: 21
Essence of Peppermints	1815	"Prices of Flint Glass for Exportation: Druggist's Furniture: 1815." Printed list. Handwritten at bottom: Thos. & Geo. Hawkes, Dudley; H. A. Y. Stater & Co., Agents, Philadelphia. Joseph Simons.	Vials: per gross 17s	Prices of Flint Glass . . . 1815
Peppermint, Essence of	1817	Estate inventory for Samuel Benjamin Vierling, apothecary, Old Salem, North Carolina.	—	Rosamund Smith 1977, pers. comm.
Essence of Peppermint	1817	Vierling estate sales list.	Medicine: 1 ½ doz. \$3.74	Rosamund Smith 1977, pers. comm.
Essence Peppermint	February 1818	Advertisement for empty vials by the Union, Olive and Gloucester glass factories in southern New Jersey and associated with Dr. Thomas Dyott.	—	Van Rensselaer 1969: 168; see also McKearin 1970: 45
Essence Peppermint Ess. Peppermint	ca. 1820	Advertisement or "Catalog" of Dyott's wares. Listed twice, once under "Patent medicines etc." and under "Flint and other Glassware." Both lists include other English patent medicines.	—	Putnam 1968: 24; McKearin 1972, pers. comm.
Juniper Ess. Pepperm.	December 1821	Advertisement by E. Edward's listing several patent medicines.	Medicines: 2/9; 11½ or ¼	<i>The Times</i> 1821: 4
"Essence of peppermint"	1821–1831	Records of the Hudson's Bay Company show it importing essence of peppermint by the pound or dozen. After 1831 imported by the dozen.	—	Krause 1971
"Peppermint vials"	1824–1831	Records of the Hudson's Bay Company list both Essence of Peppermint and Turlington vials.	—	Krause 1971

Form of Citation	Date	Comments	Price	Reference
[VIALS], Peppermint	1824	"Prices Current. Glass ware of the Philadelphia and Kensington Vial and BOTTLE FACTORIES." Dr. Dyott. Other patent medicines on the list.	Vials: gross \$2.12½	McKearin 1970: 38
[VIALS], Peppermint	1832	(Figure 4) Circular from Dr. Dyott to Congress on revising the tariff on apothecaries' glassware.	Vials: see prices in Fig. 4	Dyott 1833: 53
Peppermint	March 1836	Hudson's Bay Company, New Caledonia District Inventory. 1/12 doz.	—	Don Harris 1972, pers. comm.
essence of peppermint	April 1839	Purchase by two peddlers from a wholesaler, Ashfield, Mass.	Medicine: 3 bottles \$0.44	Landing 1969: 13
"essence of peppermint"	1839	Ledger, Jasper and Joseph Bement, Ashfield, Mass. Wholesalers.	Medicine: \$1.75 doz.	Landing 1969: 17
Essence of Peppermint	1839	Catalog of S. Maw, a London wholesaler of Druggist Supplies. Listed under "Patent Medicine Bottles."	Vials gross £1-	S. Maw 1839: 38; L. J. Skinner 1976, pers. comm.
Essence of Peppermint	1844	Invoice of cost of goods shipped from London . . . and received at Fort Vancouver in 1844 for the Columbia Department Outfit 1845 by the Hudson's Bay Company. 18 dozen Essence of Peppermint.	Per doz. 10/6 Total £9/9	Ross 1976: 1384, 1415
Essce. of Peppermint	1845	Rae's Artic Land Expedition by Norway House Outfit: 1/2 doz. Invoice includes Turlingtons and other medicines.	Medicine: doz. 14/- 1/2 doz. 7/-	Rae 1953: 309
Essence Pepperm ^t	1846– 1868	Mold room inventory, Stevens and Williams, glass makers, Stourbridge, England. Entry for one 1/2 oz. brass mold.	—	Stevens and Williams
Ess. Peppermint	1850–1	Property of Pierre Chouteau Jr. & Co. U.M.O. on hand at Fort Union, 1/6 doz. Inventory includes Turlington, Opodeldoc.	1/6 doz @ .30	Historical Society of Montana 1966: 217
ESSENCE OF PEPPERMINT	mid 19th century	(Figure 12) Pattern sheets, loose numbered pages, probably English.	—	on file, Brierley Hill Glass Collection, Dudley Metropolitan Borough, England
Essence Peppermints	mid 19th century	Rotherham Glassworks, Yorkshire. Price list, vials listed under "Glass-Sundries" along with Dalby's, Opodeldocs, Godfreys.	Vials: 9/- gross	Beatson, Clark and Company 1951: 20

Ess. Peppermint	1852	List of articles for druggist who is starting business. Listed under "Patent Medicines" but not included in "Druggist Glassware" although Turlingtons, British Oil, Godfreys, etc. appear in both places.	—	Carpenter 1852: 54, 56
Essence of Peppermint	1852	List of Drugs and Medicines for Country Storekeepers just beginning business; listed under "Patent Medicines etc."	—	Carpenter 1852: 60
Ess. Peppermint	1854	List of articles for druggist just starting business. Listed under "Patent Medicines" but not under "Druggist Glassware" although Turlingtons, Dalby's etc. appear in both places.	—	Carpenter 1854: 54, 56
Essence of Peppermint	1854	List of Drugs and Medicines which should be stocked by Country Storekeepers. Listed under "Patent Medicines etc."	—	Carpenter 1854: 60
Peppermint	1862	Glassmakers price list from Whitney Brothers, Philadelphia; listed under "Patent Medicines and other vials" along with other English patent medicines.	Vials: gross \$2.25	Van Rensselaer 1969: 136
Essence P mint	1862	Bill from Lymans, Clare & Co., Montreal to Charles Robin & Co., Paspebiac. Also included are Steers Opodeldoc, Paregoric Elixir. 3 doz.	Medicine: doz. .50 3 doz. 2.50	Canada. Public Archives
Essence Peppermint	1863	Bill from Lymans, Clare & Co., Montreal to Charles Robin & Co., Paspebiac. Also included are Steers Opodeldoc, Friar's Balsam. 1 doz.	Medicine: doz. .50	Canada. Public Archives
Essence of Peppermint	1864	"Dissolved in spirits of wine, and stained green with parsley, it [essential oil] makes the essence of peppermint, so extensively sold in stamped bottles."	—	Dictionary of Medical and Surgical Knowledge . . . 1864: 523
Essence of Peppermint	1866	Listed under "Bottles, Patent Medicine." Also on list is a bottle for Essence of Pennyroyal.	Vial: gross 8/-	S. Maw & Son 1866: 182
"Essence of Peppermint"	1867	Compilation from Belcher's Farmers Almanac.	—	Vienneau 1969: 30
ESSENCE PEPPERMINTS	[1867]	Catalog of Beatson & Co., Rotherham. Listed under "Glass-Sundries," illustrated, showing PEPPERMINT side as well as square base view. One of the rare occurrences where both a ½ oz. and 1 oz. size is indicated.	Vial: per gross 1/2 oz. 9/- 1 oz. 12/-	Beatson & Co. [1867]: 16, Fig. 91

Form of Citation	Date	Comments	Price	Reference
Essence of Peppermint	1868	Maw Catalog under "Bottles: Patent Medicine."	Vial: gross 8/-	L. J. Skinner 1976, pers. comm.
Peppermint	1875	Catalog of Wm. McCully & Co., Pittsburg. Listed under "Patent Medicine Vials, etc."	Vial: gross \$4.50	Innes 1976: 225
Peppermint	1876 1880 1887 1897	Catalogs of Whitall Tatum, Philadelphia. Listed under "Green glassware . . . Patent Medicines and other vials." Price does not change.	Vial: gross \$3.75	Whitall Tatum and Co. 1876; 1887; 1897; 1919; 1971; 47; James 1967
Peppermint	ca. 1876	Catalog of Hagerty Brothers, U.S.A. Listed under "Green Glass Ware . . . Patent Medicine and Other Vials."	Vial: gross \$3.75	Hagerty Brothers and Company [n.d.]: 229
Ess Peppt	1876	Invoice for C. Robin & Co., Paspebiac from J. W. Brayley, Montreal. 6 doz.	Medicine: 6 doz. \$6.00	Canada. Public Archives
Peppermint	1882	(Figure 5) Catalog of the Allen Company, New York. Listed under "Green glassware . . . Patent Medicines and other Vials."	Vial: gross \$3.75	Allen 1882: 246
PEPPERMINT (illustration)	1882	Maw Company book of illustrations, listed under "Glass bottles, pomade jars etc." No other patent medicines included.	—	S. Maw Son & Thompson 1882: 447
PEPPERMINT	After 1886	Catalog of Allen Company, New York. Listed under "Green glassware . . . Patent Medicine and Other Vials."	Vial: gross \$3.75	Allen [n.d.]: 257
PEPPERMINT	ca. 1887	Catalog of Smalley Company, Boston. Listed under "Green glass . . . Patent Medicine and Other Vials".	Vial: gross \$1.88	Smalley [n.d.]: 39
PEPPERMINT	1891	Maw Company book of illustrations.	—	L. J. Skinner 1976, pers. comm.
ESSENCE PEPPERMINT	[1892]	Catalog of Beatson & Co. Rotherham. Listed under "Sundries-Glass," illustrated, showing PEPPER-MINT side as well as square base view. Both 1/2 oz. and 1 oz. size are indicated. Vial for Essence of Pennyroyal is also illustrated.	Vial: gross 1/2 oz. 8/3 1 oz. 10/3	Beatson & Co. [1892]: 27-28

PEPPERMINTS	1900–01	Price list for tank glass; Blast of 1900–1901. Listed under Patent Medicines along with Turlingtons, Dalbys, Godfreys, etc.	Wages: gross .58	American Flint Glass Workers Union [n.d.]: 23
PEPPERMINTS	1903	Price list for tank glass; Blast of 1903–04. Listed under Patent Medicines along with other 18th century English patent medicines.	Wages: gross .58	American Flint Glass Workers Union 1903: 20
PEPPERMINT (illustration)	1903	(Figure 11) Maw company book of illustrations. Illustration of bottle with PEPPERMINT molded on side. No other 18th century English patent medicines are included.	—	S. Maw Son & Sons 1903: 162
PEPPERMINTS	1904	Price list for tank glass; Blast of 1903–04. Listed under Patent Medicines with Dalbys, Godfreys, Turlingtons.	Wages: gross .58	American Flint Glass Workers Union 1904: 26
Essence Peppermint	1911	Catalog of the Cumberland Glass Company, New Jersey. Listed under Patent Medicine Vials. Illustration shows square bottle without lettering although both Turlingtons and Liquid Opodeldoc are lettered.	Vials: gross \$6.25	Cumberland Glass Manufacturing Company [n.d.]: 26
Peppermint	after 1913	(Figure 3) Catalog of Dominion Glass Company, Montreal. Listed under Extracts. No other 18th century patent medicine vials are illustrated in this catalog.	—	Dominion Glass Company Limited [n.d.]: 45
Peppermint Essence	1926	Inventory of mold equipment from Dominion Glass Company. 1/2 oz. hand mold, Stock No. 2625.	—	Dominion Glass Company Limited 1926: 70

Appendix B
Evidence for the Use of Essence of Peppermint

Site	Dates of Occupation	Affiliation	Comments	Reference
<i>Military</i>				
¹ Artillery Park	1661–1759 1759–1871 1871–present	French British Canadian	3 examples, two were from disturbed contexts and one from a British officers' latrine, post 1850s.	Marcel Moussette 1977, pers. comm.; Hélène Deslauriers 1978, pers. comm.
² Fort Atkinson	1820–1827	American	17 blue-green and 6 colorless examples. Functions of buildings where fragments were found could not be positively identified. Other fragments came from areas not directly associated with structures.	Carlson 1979: 83–84; 142–43
³ Fort Beauséjour/ Cumberland	1751–1755 1755–1833	French British	8 examples (see Figure 9); 2 from post occupation contexts; 2 from officers' quarters (1776–1783) but material could date to early 19th century; 2 from casemates; 1 from guardhouse.	—
⁴ Fort Coteau-du-Lac	1789 ca. 1850	British	6 examples (see Figures 1a, 7, 8c–g); 3 from possible dump area (ca. 1840–1860); 1 from storehouse/1812–1814 temporary officers' Quarters; 1 from storehouse/hospital (ca. 1789–1820s); 1 from canal fill. Some of these may date after the military period.	Jones 1975
⁵ Fort Lennox	1759–1760 1760–1870 1870–present	French British Canadian	Base-body sherd may have [ROY]AL on one side.	—
⁶ Fort St. Joseph	1796–1812 1813–1828	British, North West Company, Independent Fur traders	Also a fur trade post. 5 examples. 1 from British military stores building (ca. 1796–1814); 1 from military bakehouse (1798–1802); 1 from fur trade blacksmith (appears to be secondary usage); 2 from living/storage structures outside fort, belonging to fur traders but possibly used by military.	Ellen Lee, 1980, pers. comm.; John Light 1980, pers. comm.; Karlis Karklins 1980, pers. comm.
⁷ Fort Snelling	1820–	American	17 examples; 4 from officers' latrine from layers dated 1827–1831, 1839–1842, 1842–1846 and 1845–1855; 10 from Sutler's Store (1825–ca. 1850); 3 from walled enclosure close to Sutler's Store.	Ted Lofstrom 1973, 1977, pers. comm.
⁸ Tellico Blockhouse	1794–1807	American	3 examples; 2 examples from possible barracks. This site also had a trade store.	Richard Polhemus 1976, pers. comm.; 1979

<i>Fur Trade</i>				
⁹ Astor Fort Okanogan	1811–1813 1813–1821 1821–1830s	Pacific Fur Company North West Company Hudson's Bay Company	3 frags; 1 from a blacksmith's shop, 1 from exterior of shed labelled "Trading Store."	Grabert 1968: 3–5, 30–31, Fig. 2
¹⁰ Fort au bas de la Rivière (Fort Alexander)	1792–1821 1821–early 1900s	North West Company Hudson's Bay Company	1 base-body fragment from surface.	Jack Steinbring 1977 pers. comm.; 1980: 156
¹¹ Fort George	1792– ca. 1800	North West Company	6 or 7 vessels.	Kidd 1970: 131–32, Fig. 82
¹² Fort Pelly I	1824–1856	Hudson's Bay Company	Fragment.	G. C. Watson 1974, pers. comm.
¹³ Fort Providence	1790–1823	North West Company	Fragment.	Dale Perry 1971, pers. comm.
¹⁴ Fort Rivière Tremblante	1791–1799	North West Company	Complete except for finish.	Mackie 1967
¹⁵ Fort St. James	1806–1821 1821–present	North West Company Hudson's Bay Company	3 examples, one almost complete example recovered from privy (1850s–early 1880s).	Elizabeth Snow 1977, pers. comm.
⁶ Fort St. Joseph			See above in Military.	
¹⁶ Fort Timiskaming	1770s–1821 1821–1902	Compagnie du Nord Hudson's Bay Company	1 fragment (Figure 16).	—
¹⁷ Fort Union Trading Post	1828–at least 1851	American Fur Company	1833 Use of Essence of Peppermint as a specific.	Thompson 1968: 157; Billington 1962: 45, 56
¹⁸ Fort Vancouver	1829–1860	Hudson's Bay Company	Base-body fragment from privy pit (ca. 1829–1836).	Lester Ross 1971, pers. comm.
¹⁹ Fort White Earth	1810–1813	North West Company	1 example.	John Nicks 1972, pers. comm.
²⁰ Fort William	1800–1821 1821–1880 1880–present	North West Company Hudson's Bay Company Canadian Pacific Railway	1 example complete except for finish.	J. M. Brunello 1972, pers. comm.
²¹ Grand Portage National Monument	1785–1802	North West Company	5 fragmentary examples from a kitchen structure.	Alan Woolworth 1970, pers. comm.; Lofstrom 1974
²² Lapière House III	1860s	Hudson's Bay Company	1 fragment.	Richard Morlan 1980, pers. comm.; Chris Stevens 1974, pers. comm.

Site	Dates of Occupation	Affiliation	Comments	Reference
²³ Lower Fort Garry	1830–1911	Hudson's Bay Company	1 complete example (Figure 1c, 10) found in a privy associated with the Big House (1880s).	James V. Chism 1977, pers. comm.
²⁴ Park River Post	1800–?	North West Company	Alexander Henry, the younger, administered Essence of Peppermint to a sick employee (Oct. 1800).	Coues 1897: Vol. 1, 110
²⁵ Rocky Mountain House	?–1820 1835–1861	North West Company Hudson's Bay Company	2 body fragments from a cellar pit of a "trader's" hut; 1 fragment from plough zone.	Don Steer 1977, pers. comm.
<i>Native Sites</i>				
²⁶ Ada Site	ca. 1820– ca. 1850	Ottawa	1 example from a burial.	Herrick 1958: 9, Fig. 16
²⁷ Colfax Ferry Site	1803–1840	Pascagoula	1 example from a burial. Example has one P missing in PEPERMINT.	Webb 1962: 32
²⁸ Des Plaines River	ca. 1775– ca. 1820	Potawatomi	2 examples from burials; one example has a P missing in PEPERMINT.	Quimby 1966: 142–46
²⁹ Leavenworth	ca. 1800–1832	Arikara	Base-body fragment from the village site; 1 complete example from child burial in cemetery.	Krause 1972: 81; Bass, Evans & Jantz 1971: 47–48, 120
³⁰ Madeline Island	1760–1820	Chippewa	1 example from a settlement.	Quimby 1966: 156
³¹ Osnaburgh House	1786–present	Ojibwa Hudson's Bay Company	In 1884 2 bottles Essence, Peppermint were traded by the Hudson's Bay Company to Indians in the Osnaburgh House area.	Bishop 1974: 192
— Kokwietoch Village	1834	Bella Bella	Dr. William Tolmie gave Essence of Peppermint to a sick Indian. (Not located in Figure 17.)	Tolmie 1963: 294
³² Rhoads Site	ca. 1800–1812	Kickapoo	1 example embossed "Esense of Pepermint By the Kings Own Patent" was reported from this site in the 1930s. Burial.	Walter Klippel 1973, pers. comm.
— [Omaha Burials]	n.d.	Omaha	1 example recorded embossed "BLYTHE/ ESSENCE OF/PEPPERMINT/KING SPATEN" from historic Omaha burial in Dakotah County Nebraska. (Not located in Figure 17).	Krause 1972: 81

<i>Domestic/Commercial</i>				
³³ Bay Street Urban Renewal Area, Brunswick, Georgia.	ca. 1790– ca. 1840	American	3 examples from large open pits used as refuse dumps.	Craig Sheldon 1976, pers. comm. to D. Harris
³⁴ Forges du St. Maurice	1729–1762 1762–1863	French British	1 example from labourer’s house. Village associated with iron works.	Marcel Moussette 1977, pers. comm.
³⁵ Fortress of Louisbourg	1713-present	French British Canadian	2 examples from 19th century domestic period.	Jane Harris 1973, pers. comm.
³⁶ Jordon Pottery Site	1820s-1850s	Canadian	3 examples from a pottery and house site.	Jon Jouppien 1977, pers. comm.
— <i>Pearl</i>	—	British	Mrs. Simcoe, wife of the Lieutenant-Governor of Upper Canada, took Essence of Peppermint to relieve a headache. Strait of Belle Isle, Sept. 20, 1796. (Not located in Figure 17.)	Innes 1965: 202
³⁷ Place Royale, Quebec City	17th c. to present	French British Canadian	Complete example from residential/commercial area in Quebec City.	—
³⁸ Travelers Rest	1780s-1830s 1830s-?	American	1 example. During early period this site was a house with associated buildings. Later it became a wayside inn.	Kelso 1971: 21
—House, Erpinham, Norwich, England	—	English	Complete example found in brickwork of house occupied for many years by a veterinary surgeon. (Not located in Figure 17.)	Dennis 1980: 5–6

Note: Numbers refer to location on map, Figure 17.

Appendix C
Catalog of Essence of Peppermint Vials

Site/ Provenience	Bottle Height	Base Dimensions	Volume	Height of ESSENCE OF	Height of PEPERMINT	Height of BY THE	Height of KINGS PATENT	Finish	Mold Type	Glass Color	Glass Type	Comments
Artillery Park 18G30K2-1	—	20.5 × 20.5	—	—	—	—	—	—	two piece bottle mold	colorless	lead	Pontil mark present.
18G30T1	73.0	—	—	8.0	6.4	10.0	6.6	folded in, flanged	two piece bottle mold	colorless	—	Lettering starts at the base of the bottle. PEPERMINT is spelled incorrectly; blowpipe pontil.
18G33A11-27Q	74.5	19.0 × 20.0	—	4.0	6.0	7.0	4.4	folded in, flanged	two piece bottle mold	colorless	lead	Larger capitals on ESSENCE and PEPERMINT, glass-tipped pontil; bottle is filled with a sticky substance that does not have a peppermint smell.
Fort Atkinson: Type 1	74.0	20.0 × 20.0	½ oz.	—	—	—	—	flanged	two piece bottle mold	blue- green	—	Blowpipe pontil marks; mini- mum vessel estimate 17 (Carlson 1979: 83–84, 231).
Type 2	74.0	20.0 × 20.0	½ oz.	—	—	—	—	flanged	two piece bottle mold	colorless	—	Glass-tipped pontil marks, mini- mum vessel estimate 6 (Carlson 1979: 84, 231).
Fort Beauséjour/ Cumberland: 2E2E1	—	20.0 × 20.0	—	—	—	11.0	—	—	—	light green	non- lead	Letters are thin.
2E16Q2-16	—	20.4 × 20.4	—	—	—	7.1	—	—	—	colorless	lead	—
2E16R14-11	—	19.8 × 21.6	—	7.4	7.2	9.8	6.0	—	two piece bottle mold	colorless	lead	Comma after ESSENCE; P in PATENT is 8.5 mm high; pontil mark present.
2E19B9-9	—	20.7 × 20.7	—	8.0	6.4	9.9	5.7	—	two piece bottle mold	colorless	lead	Lettering starts at the base of the bottle; PEPERMINT is spelled

2E19G3-5	—	20.0 × 20.0	—	7.5	6.0	9.0	—	—	two piece bottle mold	colorless	lead	incorrectly; blowpipe pontil mark (Figure 9). M in MINT is 8.6 mm high; PATENT is too faint to measure; pontil mark present.
2E19U1-44	—	20.0 × 20.0	—	9.1	9.0	—	—	—	two piece bottle mold	colorless	lead	Pontil mark present.
2E20P4-8	—	—	—	—	—	—	—	—	—	colorless	lead	Burned.
2E25A4-22	—	—	—	—	—	—	—	—	—	colorless	lead	
Fort Coteau-du-lac: 9G6A1-138	—	21.0 × 21.0	—	7.1	—	9.0	6.5	—	two piece bottle mold	colorless	lead	Lettering is faint; pontil mark present.
9G7A2-217	—	20.4 × 20.4	—	7.3	6.5	10.1	—	—	two piece bottle mold	light green	non-lead	Bottle rests on four corners; lower part of body bulges outwards; blowpipe pontil mark.
9G7B1-144	—	20.0 × 20.0	—	5.1	5.1	10.1	5.0	—	two piece bottle mold	blue-green	non-lead	Bottle rests on four corners; lower part of body bulges outwards; blowpipe pontil mark (Figure 8c-g).
9G9G2-21	73.3	20.9 × 20.9	15.3 ml	8.1	9.0	10.2	8.9	—	two piece bottle mold	colorless	lead	Comma after ESSENCE: K and P in KINGS PATENT are 11.8 mm high (Figure 1a, 7); Pontil mark present.
Fort Lennox: 5G48C1-92	—	20.0 × 20.0	—	5.5	—	—	5.0	folded in and flanged	two piece bottle mold	colorless	lead	Pontil mark present.
5G70C3	—	21.0 × 21.0	—	7.2	7.5	—	—	—	two piece bottle mold	colorless	lead	May have ROY[AL] on PATENT side; pontil mark present.
Fort Snelling (Ted Lofstrom 1975, pers. comm.): 318-444-14	—	19.0 × 19.0	—	—	—	—	—	—	two piece bottle mold	colorless	lead?	Partly melted; blowpipe pontil mark.
318-416-14	—	20.0 × 20.0	—	—	—	—	—	—	two piece bottle mold	pale green	non-lead	Blowpipe pontil mark; PEPPERMINT/BY THE on one half of the mold; KINGS PATENT/ESSENCE OF on the other half; arched base; bulged body.
318-413-1	68.0	19.5 × 19.5	11.3 ml	—	—	—	—	flanged	two piece bottle mold	colorless	lead?	Same mold arrangement as 318-416-14; blowpipe pontil mark; arched base; bulged body.
318-393-1	78.0	20.5 × 21.5	19.4 ml	—	—	—	—	flanged	two piece bottle mold	light blue	non-lead	Blowpipe pontil mark; arched base; bulged body.

Site/ Provenience	Bottle Height	Base Dimensions	Volume	Height of ESSENCE OF	Height of PEPPERMINT	Height of BY THE	Height of KINGS PATENT	Finish	Mold Type	Glass Color	Glass Type	Comments
SS 186-18	82.5	18.5 × 20.0	19.0 ml	—	—	—	—	flanged	two piece bottle mold	light blue	non-lead	Six examples from same mold: final T in PATENT and PEPPERMINT are missing; first S in ESSENCE is backwards; the R in PEPPERMINT is a P.; blow-pipe pontil mark; arched base; bulged body.
SS162-20	—	18.5 × 20.0	—	—	—	—	—	—	two piece bottle mold	light blue	non-lead	As in SS 186-18.
SS 60-33	—	18.0 × 19.5	—	—	—	—	—	—	two piece bottle mold	light blue	non-lead	As in SS 186-18.
SS 130-16	—	19.0 × 20.0	—	—	—	—	—	—	two piece bottle mold	light blue	non-lead	As in SS 186-18.
SS 96-64	—	18.5 × 20.0	—	—	—	—	—	—	two piece bottle mold	light blue	non-lead	As in SS 186-18.
SS 144-40	—	19.0 × 20.0	—	—	—	—	—	—	two piece bottle mold	light blue	non-lead	Same mold as 318-393-1.
SS 120-14	—	21.0 × 21.0	—	—	—	—	—	—	two piece bottle mold	light blue	non-lead	Possibly same mold as 318-393-1.
SS-81-38	—	21.0 × 22.0	—	—	—	—	—	—	two piece bottle mold	light blue	non-lead	—
SS-160-79	—	—	—	—	—	—	—	folded in flat	—	green	non-lead	As in SS-186-18.
SS: WE 40-1	83.5	19.5 × 19.5	—	—	—	—	—	flanged	two piece bottle mold	light blue	non-lead	Body sherd.
SS: WE-118-12	—	—	—	—	—	—	—	—	—	light blue	non-lead	Body sherd.
SS: WE 11-10	—	—	—	—	—	—	—	—	—	green	non-lead	Body sherd.
SS-160-75	—	—	—	—	—	—	—	folded in	—	—	—	—

SS-148-60	—	—	—	—	—	—	—	—	folded in	—	—	—	—
Tellico Blockhouse: Bottle Type C	62.0	21.0 × 21.0	—	—	—	—	—	—	flanged	two piece bottle mold	—	—	Blowpipe pontil mark (Polhemus 1979: 160, 167).
Fort au bas de la Rivière: FA-1-215	—	—	—	7.4	5.7	7.9	6.5	—	—	two piece bottle mold	colorless	—	Glass tipped pontil mark (Steinbring 1980: 156).
Fort Rivière Tremblante: RT-2975	76.0 est.	21.5 × 21.5	—	—	—	—	—	—	—	two piece bottle mold	colorless	—	Complete to finish.
Fort St. James: 3T19A3	—	—	—	7.0	—	—	—	—	—	two piece bottle mold	colorless	lead	—
3T27B2	—	—	—	—	7.5	—	—	—	—	—	colorless	lead	M in PEPPERMINT is slightly larger.
3T34A2	74.0 est.	21.0 × 21.0	—	6.8	6.2	8.2	6.1	—	—	two piece bottle mold	colorless	lead	No pontil mark; larger capitals on KINGS PATENT, ESSENCE, PEPPERMINT; M in PEPPER-MINT is also larger.
Fort Temiskaming: 15G4N2-9	—	—	—	—	7.0	—	—	—	—	—	colorless	lead	Fragment has . . . ERS on ESSENCE OF side (Figure 16).
Fort Vancouver: # 1749	—	22.0 × 27.0	—	7.2	6.5	9.5	6.6	—	—	—	colorless	—	P in PATENT is 8.0 mm; pontil mark present (Lester Ross 1971, pers. comm.).
Fort William: —	78.0 est.	20.0 × 20.0	—	—	—	—	—	—	—	two piece bottle mold	colorless	—	Pontil mark present (J. M. Brunello 1972, pers. comm.).
Lower Fort Garry: 1K1P1-140	74.0	21.4 × 21.4	17 ml	7.0	7.0	8.8	6.0	V-shaped	—	two piece body mold with third base part	colorless	27% lead oxide	No pontil mark; slightly larger capitals on KINGS PATENT, ESSENCE, PEPPERMINT; (Figure 1c, 10); (John Stewart 1980, pers. comm.).
Rocky Mountain House: 15R16F1	—	—	—	—	—	—	—	—	—	—	colorless	lead	. . . EN . . . 6.4 mm high.
16R4G5	—	—	—	6.0	—	—	—	—	—	—	colorless	lead	—

Site/ Provenience	Bottle Height	Base Dimensions	Volume	Height of ESSENCE OF	Height of PEPPERMINT	Height of BY THE	Height of KINGS PATENT	Finish	Mold Type	Glass Color	Glass Type	Comments
Ada Site:												
—	76.0	21.0 × 21.0	—	—	—	—	—	—	—	colorless	—	Pontil mark present (Herrick 1956: 9).
Leavenworth:												
Burial 25	70.0	21.0 × 21.0	—	—	—	—	—	flanged	—	green	—	(Bass, Evans, Jantz 1971: 47–48, 120).
Bay Street Urban Renewal Area, Brunswick, Georgia:												
No. $\frac{699}{75}$	80.0	21.0 × 23.0	—	—	—	—	—	folded in?; flanged	two piece bottle mold	colorless	—	Larger capitals on ESSENCE, PEPPERMINT, KINGS PATENT, M in PEPPERMINT is also larger; S in KINGS is backward; pontil mark present (Craig Sheldon 1976, pers. comm. to Don Harris).
No. $\frac{699}{75}$	—	18.0 × 19.0	—	—	—	—	—	—	—	colorless	—	Pontil mark present.
No. $\frac{563}{75}$	—	20.0 × 20.0	—	—	—	—	—	—	—	blue-green	—	Blowpipe pontil mark; arched base and bulged lower body; E in THE falls half on, half off the base.
Fortress of Louisbourg												
2L11T1	—	20.0 × 20.0	—	5.5	5.5	—	—	—	two piece body with third base part	blue-green	non-lead	No pontil mark; corners have 2 mm wide bevels; no serifs on letters (Jane Harris 1973, pers. comm.).
2L9S1	—	20.0 × 20.0	—	—	—	11.0	6.3	—	—	blue-green	non-lead	No serifs on KINGS PATENT (Jane Harris 1973, pers. comm.).

Place Royale, Quebec City: 1QU2150	73.0	21.0 × 21.0	—	6.5	7.0	7.8	6.0	folded in and flanged	two piece bottle mold	colorless	—	Larger capitals on KINGS PATENT, ESSENCE, PEPPER- MINT: M in PEPPERMINT is larger.
House, Erpinham, England: —	76.0	21.0 × 21.0	½ oz.	—	—	—	—	flanged	two piece bottle mold	colorless	—	Pontil mark present (Leonard Dennis 1980, pers. comm.).
No Provenience: Jones Collection	70.0	21.7 × 21.7	17 ml	6.0	6.0	10.2	6.5	rounded	two piece body with third base part	light green	non- lead	No. 488 embossed on base; no pontil mark; except for BY THE there are no serifs on the letters (Figure 1d).
Rosewarne Collection 71.24.16	76.0	19.0 × 19.0	12 ml	7.0	6.6	8.1	6.1	folded and flanged	two piece bottle mold	colorless	lead	Pontil mark present; larger capi- tals on KINGS PATENT, PEP- PERMINT (Figures 1b, 6).
72.36.4	68.6	21.0 × 21.0	16 ml	5.5	5.0	9.3	5.3	rounded	two piece body with third base part	light green	non- lead	No. 52 molded on base; except for BY THE the letters do not have serifs; no pontil mark.
Thomson Collection 69.2	20.5 × 20.5	—	5.8	5.6	9.6	5.6	rounded	two piece body with third base part	green	non- lead	No. 52 molded on base; no pontil mark; except for BY THE the let- ters do not have serifs (Figure 13).	
National Historic Parks and Sites Reserve Collections X.72.59.33	70.8	21.3 × 21.3	—	5.6	5.8	10.3	6.2	rounded	two piece body with third base part	light green	non- lead	No pontil mark; no serifs on let- ters except for BY THE.
X.72.52.34	68.0	20.8 × 20.8	—	5.8	4.9	10.0	5.4	rounded	two piece body with third base part	light green	non- lead	Body has chamfered corners (Figure 14).

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