



Colourless glass was also de-colored with selenium or arsenic (or typically a combination of the two in conjunction with cobalt oxide) resulting in a very faint "straw" or amber tint in the thickest portions of the glass (Scholes 1952; Tooley 1953; Lockhart 2011). This colourless "color" can be very diagnostic of a machine-made bottle from between 1900 and 1915, but typically no later than the 1950s (Girade 1989; Lockhart 2011).

Generally, aqua coloured glass fragments originate from medical and pharmaceutical products including patent medicine bottles of the 19<sup>th</sup> and 20<sup>th</sup> century (Kendrick 1971). "Black" glass dates from the early-to-mid 19<sup>th</sup> century. The addition of iron when making glass was a common practice up until 1860 and produced dark olive or dark amber glass that became known as "black glass" (Kendrick 1971).

Opaque white, or "milk" glass was most commonly used for cosmetic containers, toiletry bottles, or cream jars from about 1870 through to the 20<sup>th</sup> century (Lindsey 2012). It was typically produced by the addition of tin or zinc oxide, calcium and phosphate rich animal horns, bones, fluorides (i.e. fluorspar), and phosphates (Kendrick 1971).

Pressed glass dishes and dishwares can also be temporally diagnostic. Non-lead glass in a variety of patterns is common on Canadian sites post-1860 (Jones and Sullivan 1989:35).

## **Structural Artifacts**

### ***Nails***

Nails can be temporally diagnostic, depending on whether they are wrought, cut, or wire drawn (Adams 1994:92). Wrought nails were handmade and are identifiable by their irregular heads, hammered body texture, with all four sides coming to a taper. Wrought nails were the most commonly used nail in Upper Canada until about 1830 when machine cut nails started to become more popular. Cut nails date to the mid-to-late 19<sup>th</sup> century. Cut nails were machine cut and have a flat head. They were invented as early as 1790, but did not become common in Ontario until 1830. They were replaced by wire drawn nails in the 1890s. Wire drawn nails are identical to the type of nails in current use today, with a flat, round head and a wire shaft.

### ***Window Glass***

There were two common methods of making window or "flat" glass before industrial improvements developed in the late 19th and early 20th centuries. The crown glass method involved spinning out molten glass into circular sheets, which were then cut into panes. In the broad glass method large tubes or cylinders were blown, cut down one side, and then opened flat to form a large sheet. On small sherds, it is impossible to differentiate these two manufacturing methods.

A very visible change in window glass, however, took place in the 1840s. This was due, in part, to an English tax on window glass based on weight. Before the tax was lifted in 1845, manufacturers made window glass as thin as possible (usually by the crown method) to minimize the effects of this tax. As a result, most window glass made before the mid-1840s tends to be less than 1.6 mm thick, while window glass made after this date is thicker. While this is not true for every sherd, a sample of window glass dating to the first half of the 19th century should have an average thickness of 1.1 to 1.4 mm compared to about 1.7 to 2.0 mm from the last half (Adams 1994:92,93; Kenyon 1980).



## **Personal Artifacts**

### ***Clay Tobacco Pipes***

White clay pipes were very popular throughout the 19<sup>th</sup> century, with a decline in use by 1880 when they were replaced by briar pipes and cigarettes (Adams 1994:93). Most white clay pipes found in Upper Canada were manufactured in either Quebec or Scotland; occasionally examples from English, Dutch, French and American makers are also found. The maker's name may be impressed with the city of manufacture on the opposite side, although this did not become common practice until the 1840s.

### ***Buttons***

Agate buttons are made from pressed ceramic powder manufactured by the "Prosser" process patented in 1840. They became common from the late 1840s onwards. Agate buttons, which are often confused with white glass buttons, are distinguishable due to the dimpled appearance of the back of the button which is a result of the moulding process (Adams 1994:96).

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