

Pewter Toxicity – a few thoughts

This is a subject that is regularly asked of pewter collectors and of which there are a variety of views. The following short article simply sets out some recently expressed opinions. The reader should do their own research and draw their own conclusions.

Two recent letters to The Times draw attention to the various thoughts on drinking out of Pewter vessels (mugs, beakers, tankards, cups, flagons, - eating off pewter plates etc.)

The first letter said –

Ale drunk from old Pewter tankards certainly does produce its own tell-tale signs; namely those associated with lead poisoning.

Pewter is an alloy of tin with small amounts of lead and copper and drinking ale or cider – (which is even more acidic) – from pewter, causes the lead to gradually leach out. A better option is to use a Britannia Metal tankard which is lead free with antimony replacing the lead. ‘real ales is best served in a glass tankard’

The second letter commenting on the above –

Cider-tippers should be cautious about advice to switch to Britannia Metal an alloy containing 5% Antimony.

This metal dissolves in acidic media to give salts that are powerful purgatives.

The ‘Everlasting Pill’ according to the British Medical Journal of 1907 records that this pill was composed of metallic antimony.

A single pill could serve an entire family and be considered an heirloom to pass on “we heard of a lady who having swallowed one of these pills became seriously alarmed at its not passing. Fear not said her Physician – it has already passed through a hundred patients with no difficulty”

Canvassed thoughts of knowledgeable Pewter Collectors on this matter are as follows –

One

Lead poisoning is a serious problem as lead is a cumulative poison which interferes with enzyme biochemistry. Drinking water from lead pipes in soft water areas is a definite problem but the furring of pipes in hard water areas gives protection. I have always understood that the leaching of lead from pewter is potentially hazardous when the lead is above 20% as in Roman pewter. This is in line with the Worshipful Company's ruling in the 16th century that ‘lay’ metal, which may have 15% of lead, should not be used for pieces used for food or drink. However I have not come across any scientific evidence for these figures.

I can't think that there would be a problem with most pewter unless an acidic substance were in contact with it for an extended period of time.

Compounds of antimony and copper can be toxic but usually in higher concentrations and are more likely to be excreted than lead.

Two

It is a fact that many metal compounds are toxic to a greater or lesser extent.

It is also true that liquids, particularly acidic liquors such as vinegar, will dissolve small quantities of Lead, Antimony etc from any metallic vessel.

The amount of metal leached into the drink will depend on, among other things the acidity of the liquor, the accessibility of the vessel's surface to chemical reaction, and the time the liquor is in contact with the vessel. It is of course easiest to change the third of these variables by drinking rapidly, thus reducing the residence time of the beverage in the pot!

cheers!-

There may be other consequence of rapid consumption!