

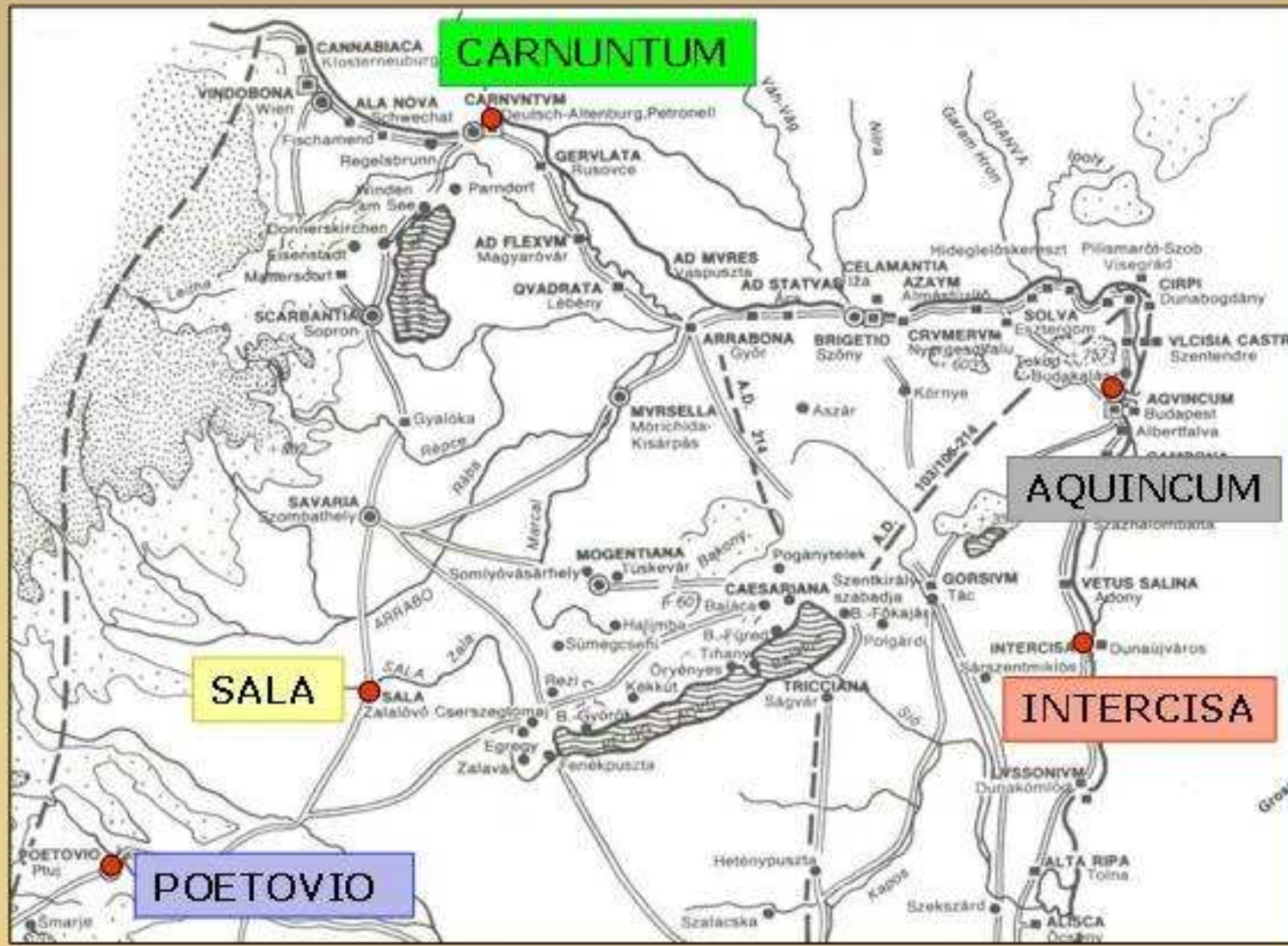
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Analyses of Roman pottery and lamps from Aquincum and Intercisa

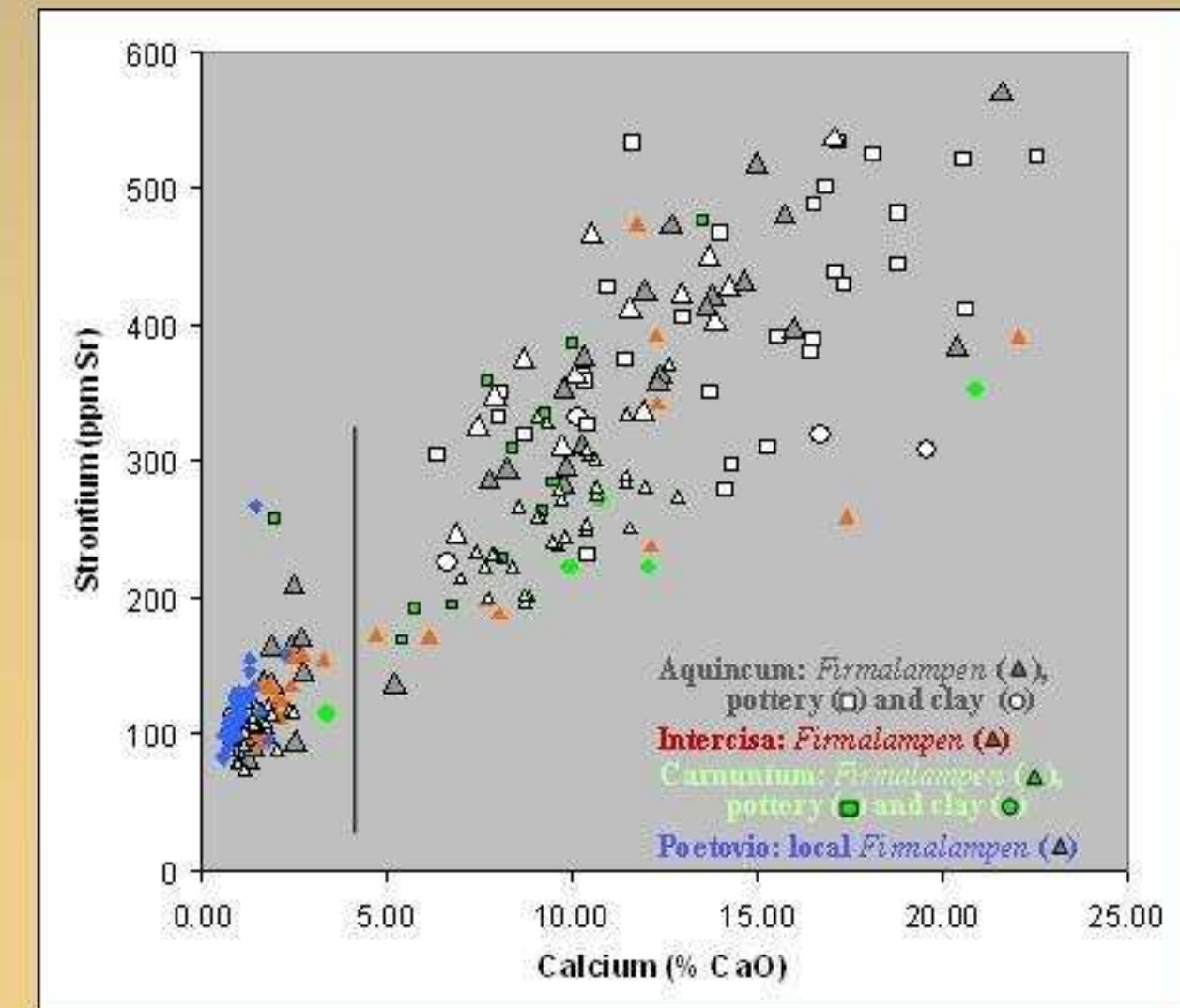


Questions:

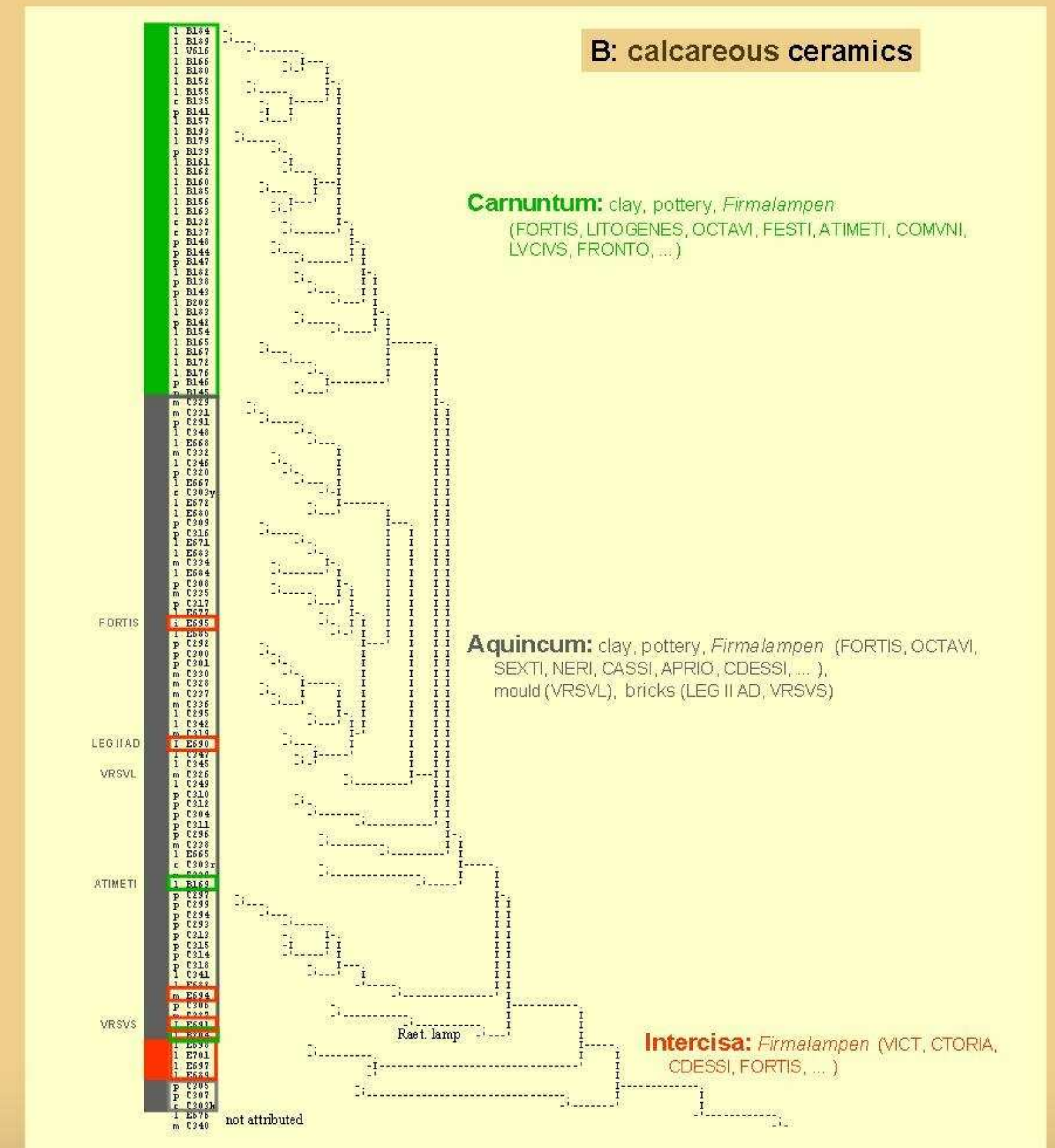
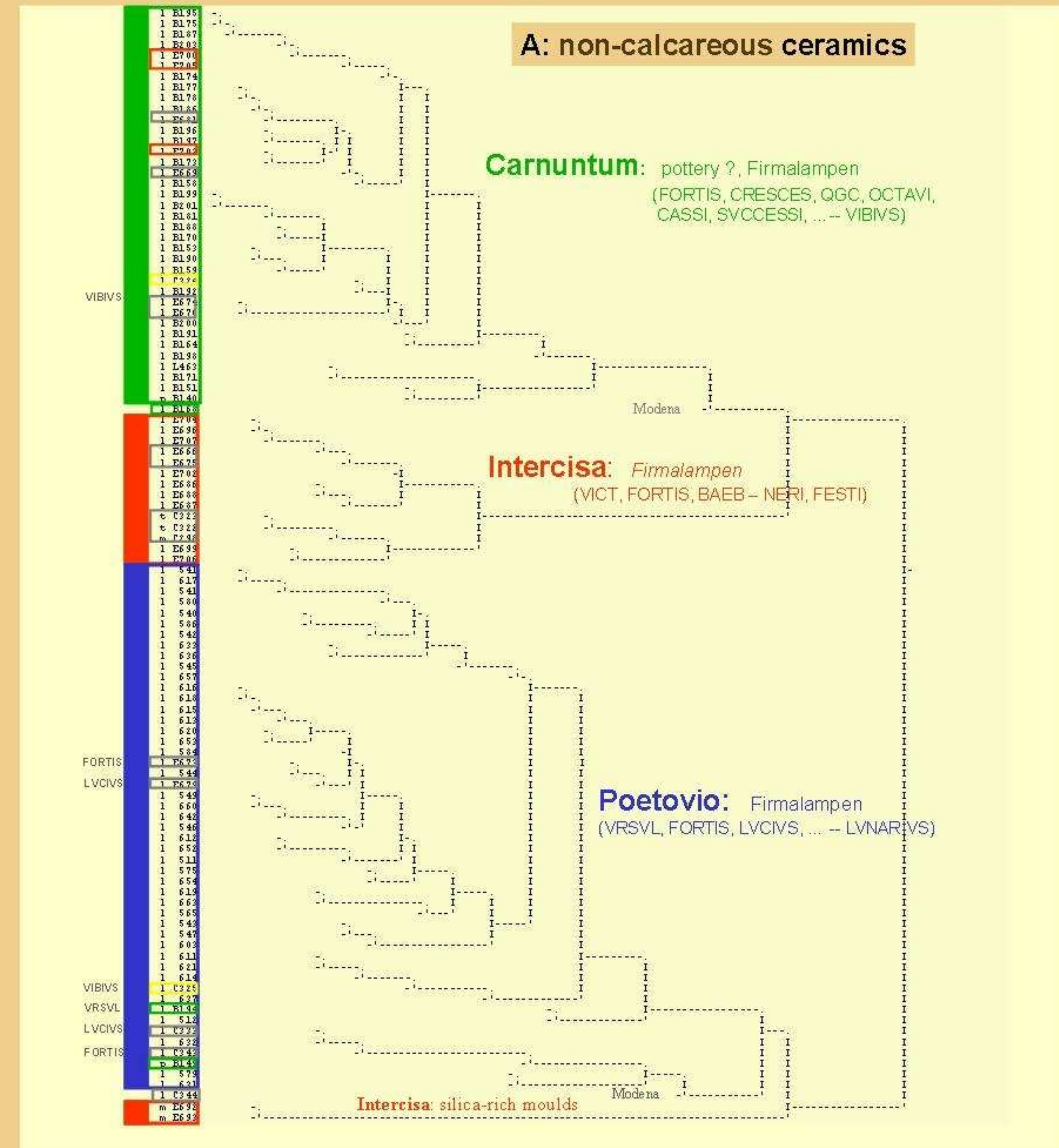
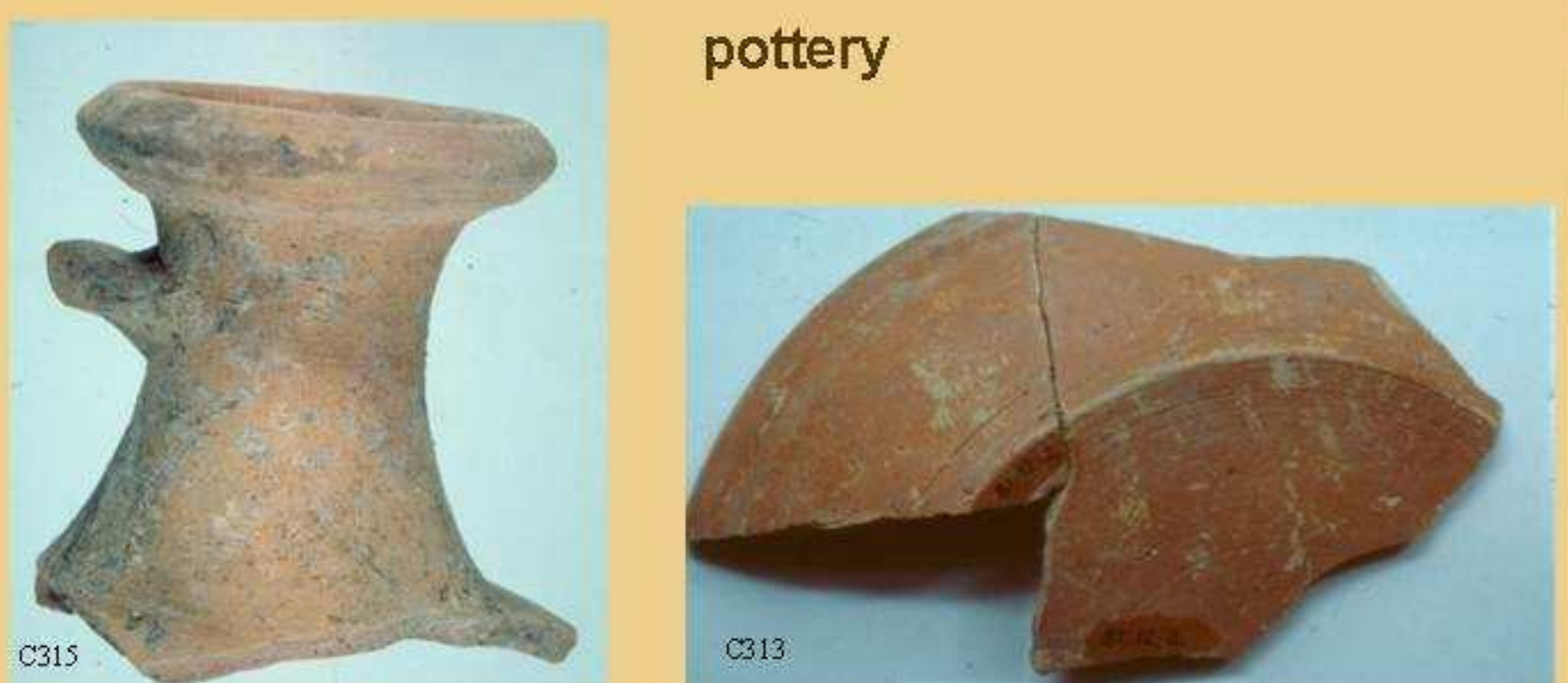
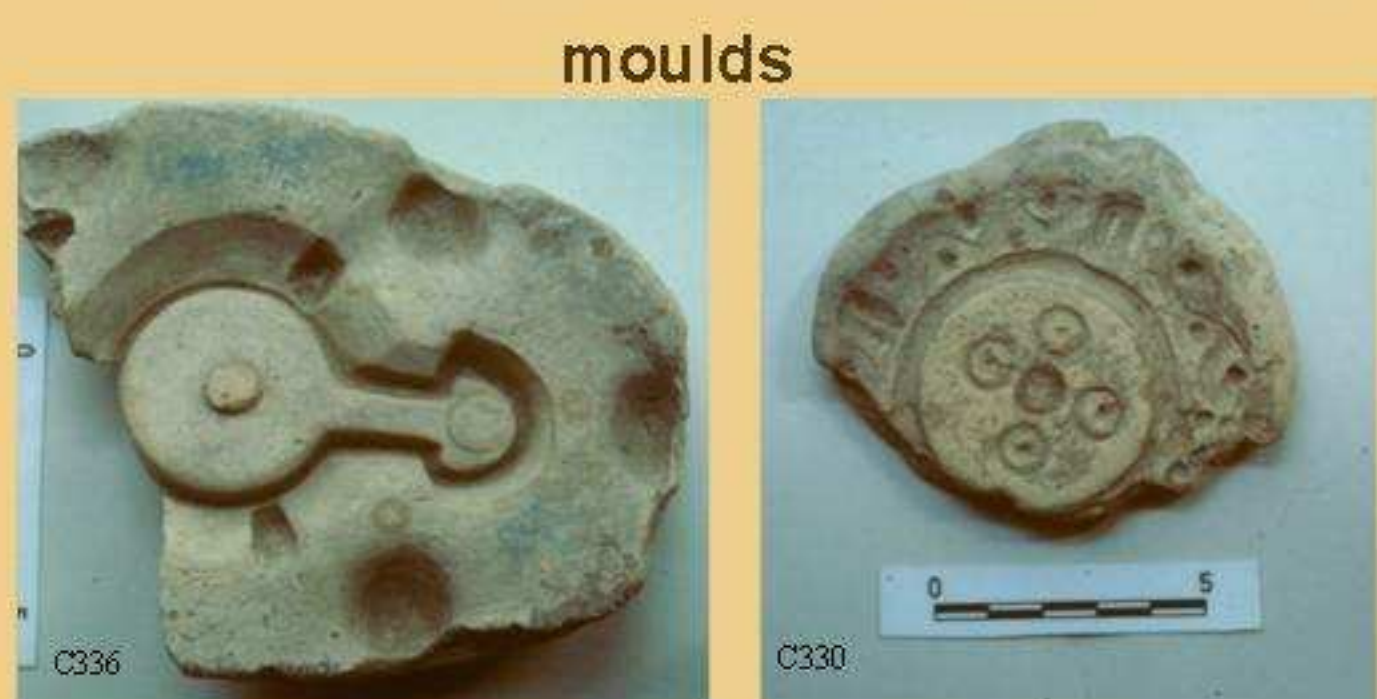
- Is the production of lamps connected with the production of other ceramic products?
- Are lamps made as copies or in legal branch workshops? Which names are local?
- How production and trade of such items like lamps was organised in Roman times?

Method:

Samples of 1,0 gram (or 0,1 by drilling) have been analysed by WD-XRF to distinguish imports and local products. Analyses of moulds and of various pottery served as reference groups. A databank of some thousand analyses of Roman lamps is available. The major grouping of the data is according calcium contents. Therefore the data are regarded in two separated dendrograms using average linkage based on elements Si, Ti, Al, Fe, Mg, Ca, Na, K, V, Cr, Ni, Rb, Sr, Zr (Mn, P, Cu, Zn, Y, Nb, Ba, Ce, Pb were not used).



Examples of analysed ceramics:



Results:

- **Aquincum:** calcareous ceramics represent the local material and include moulds, pottery and Firmalampen, also such with North-Italian names and one mould stamped VRSVL (as lamps made in Poetovio). Imports from Aquincum were detected in Intercisa (one mould, two bricks, one lamp) and in Carnuntum (one lamp).
- **Aquincum:** non-calcareous lamps probably are imports. They fall into the same group as non-calcareous lamps in Carnuntum. Two lamps with North-Italian stamps are from Intercisa. Four (analysed) imported lamps are from Poetovio (LVCIVS, FORTIS). One lamp is attributed to Modena (FORTIS). Two moulds for terra sigillata and one mould for a Firmalampe probably represent imports from Intercisa.
- **Intercisa:** the local group includes non-calcareous lamps (probably also the few lamps up to 8% CaO) and two moulds with a higher silica content. The local lamp-maker is VICTOR (?).

The data yield a wide field for archaeological discussion. The model of branch workshops as in the 1st century (e.g. Vindonissa) seems to be replaced in the 2nd century and within this region by extensive copying lamps with Italian names.