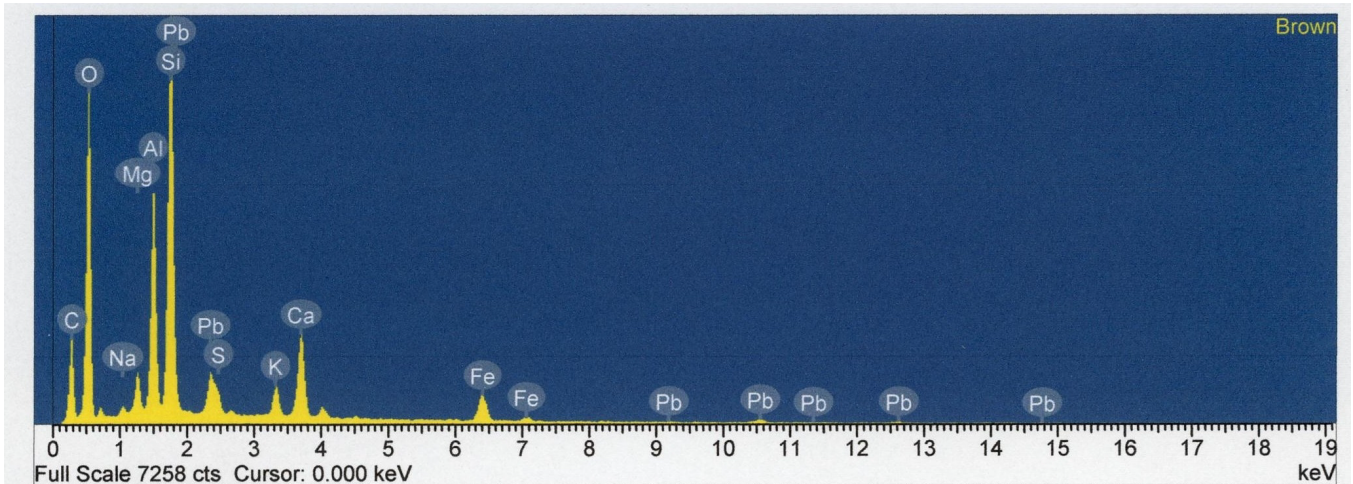


# Sample 9

## Brown background

### EDS



#### *Elements detected:*

- C - Carbon
- O - Oxygen
- Na - Sodium
- Mg - Magnesium
- Al - Aluminum
- Si - Silicon
- S - Sulfur
- K - Potassium
- Ca - Calcium
- Fe - Iron
- Pb - Lead

#### *Pigments identified:*

**Umber (combinations of  $\text{Fe}_2\text{O}_3$  and  $\text{MnO}_2$ )**

Vermilion  $\text{HgS}$

Red ochre  $\text{Fe}_2\text{O}_3$

Like ochre, umber is a natural earth pigment that has been used since prehistoric times. It contains manganese dioxide as well as iron oxide. When left in its natural state, the color is referred to as raw umber, and when heated, burnt umber. Heating the material creates a darker and more intense hue.