

## Question 24 (4 marks)

Assess the impact of atomic absorption spectroscopy (AAS) on the scientific understanding of the effects of trace elements. 4

Atomic Absorption Spectroscopy (AAS) is a test used to determine the elements of compounds by determining how much light they absorb and the spectral of colours this creates. Each element has a different number of electrons which creates a different spectrum for each element. This number of spectral lines increases with the number of electrons in an element.

AAS is important for the understanding the effects of trace elements as it is used in issues such as narcotics and steroids in blood. AAS can determine what is in the blood and produce a readout. AAS is also important in the use of discovering which where electrons go in a reaction. This includes what products they will make in a reaction.

Trace elements can also be determined from soil samples, glass, metal and paint. Soils contain different amounts of elements that ~~can be~~ which can be determined and then compared to different places to determine where it came from or find any contaminants.

Paint is also able to be tested as different manufacturers use different proportions ~~total~~ of elements and ~~so~~ compounds to create the paint.