Teaching resource 10

The bromine test for double bonds

You will need:

2 black carbon C^k grey straws	4 white hydrogen H^a flexible white straws	3 green halogen Br^a

The reason molecules such as ethane can polymerize is that two carbon atoms have extra combining power because of the double bond between its two carbon atoms.

A good test for a double bond between carbon atoms is to see if the substance will decolorize bromine water Br_2 (aq).

This test works because bromine atoms can add to the double bond to produce dibromoethane as shown in the diagrams below.

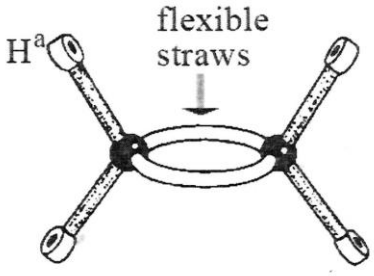

Figure 1 Ethene

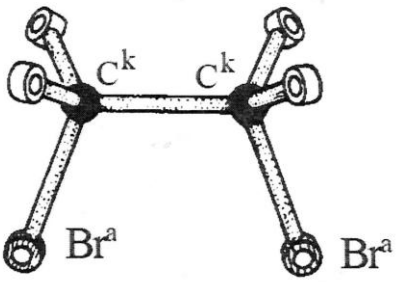

Figure 2 Dibromoethane

Products which can be used for this demonstration:

0045 Orbit Foundation Set
0046 Orbit Basic Structures Class Set | 0026 Orbit Basic Structures Individual Set
0047 Orbit Organic/Inorganic Class Set | 0028 Orbit Organic/Inorganic Individual Set
0049 Orbit Biochemistry Class Set | 0029 Orbit Biochemistry Individual Set
0041 Large Class set

Or you can order sufficient individual atoms from the Orbit, Minit or Unit systems for your individual needs.