

How to Build 3D Chocolate (Theobromine) Molecule

Materials:

13 large Styrofoam Balls

1 package of wooden skewers (or pipe cleaners)

3 Ziploc bags (large)

newspaper

8 small Styrofoam Balls

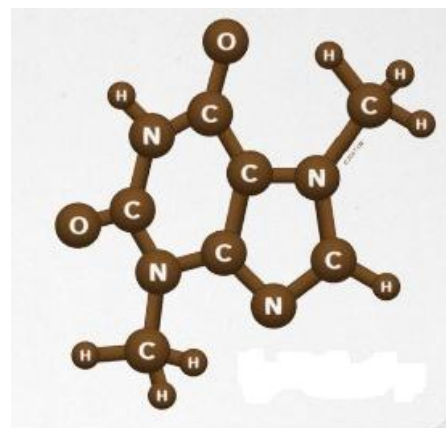
wire cutter or heavy duty scissors

water-based craft paints (3 light colors)

Sharpie® Marker (black)

Instructions:

1. To protect whatever surface you will be working on cover it with multiple layers of old newspaper.
2. Pour one color of water-based craft paint into a large Ziploc bag. Place seven of the large Styrofoam balls into the bag and seal the bag. Be sure that each ball is coated with the paint. Set the Styrofoam balls on some old newspaper to dry (about 1 hour).
3. Using the same process described in step 2 color four large Styrofoam balls with the second color of water-based craft paint (be sure to use a new large Ziploc bag). Again, be sure that each ball is coated with the paint. Set the Styrofoam balls on some old newspaper to dry (about 1 hour).
4. Using the same process described in step 2 color the two remaining large Styrofoam balls with the third color of water-based craft paint (be sure to use a new large Ziploc bag). Again, be sure that each ball is coated with the paint. Set the Styrofoam balls on some old newspaper to dry (about 1 hour).
5. Once the large Styrofoam balls have dried use the black Sharpie® to write a large C on one the first set of seven large Styrofoam balls (first color). These represent Carbon atoms. On four of the large Styrofoam balls (second color) use the black Sharpie® to write a large N. These represent Nitrogen atoms. On the remaining 2 large Styrofoam ball (third color) use the black Sharpie® to write a large O. These represent Oxygen atoms.
6. On the 8 small, uncolored Styrofoam balls use the black Sharpie® to write a large H. These represent Hydrogen atoms.
7. Remove 12 of the wooden skewers from the package. Use wire cutters or heavy duty scissors to cut of the sharp tips of the skewers. Next, cut the 12 skewers in half. Color the skewers with the Sharpie®. Set aside.
8. Use the diagram at right to as a model to help you build your molecule



CONGRATULATIONS....

YOU HAVE SUCCESSFULLY BUILT A CHOCOLATE (THEOBROMINE) MOLECULE!!!