Students’ worksheet

**Modification of polymers – unexpected change of properties**

***Task 1:*** Explore the behavior of two pieces of cotton wool.

*Chemical and aids:* Two different pieces of cotton (one from your teacher, the other, the “common” cotton wool, take it from your home), your hand, source of heat and spatula or knife, Petri dish, matches.

*Procedure:*

1. Put a small piece (not bigger than fruit of strawberry) of “common” cotton wool on a Petri dish. Try to set it on fire using hot spatula. If you are not successful, use matches. Describe into the box bellow in “Observation” section the results.
2. Put a small piece of cotton wool from your teacher on your hand. Try to set it on fire using hot spatula. If you are not successful, use matches. Describe into the box bellow in “Observation” section the results.

*Observation:*

*Results and discussion – discuss with teacher, what was the modification made with your samle of cotton wool and on the basis of provided information explain your results:*

*Questions:*

1. What change occurred in polymer to change dramatically the properties? Was it necessary to split the main polymer chain?
2. Try to find (e.g. using Internet) other possible modification of wool? How the properties change?

*Conclusion:*