

Which Cloth Is More Effective as a Mask?

Zahran, Sama (School: Eman Schools)

The purpose of my experiment is to find out which fabric used for masks is most useful in protecting against pathogens. The transmission of pathogens across a fabric was evaluated by measuring the distance that aerosol travels through a cloth mask made of different materials. The thickness of each material was measured using a digital caliper. My problem statement is which fabric used for masks is effective to protect from pathogens? I tried to show that cotton blocks more pathogens than polyester, meaning that the polyester fabrics are more breathable because it takes a shorter time for the mist to go through it. Besides, I was also trying to test which materials are more effective when resisting different pathogens. In my experiment, I compared eight different fabrics to see which one is most effective in protecting against pathogens. My results show that the uniform pant, which is made of 100% cotton, was the least breathable. On the other hand, the girl's shirt, made of three different fabrics, rayon, polyester, and spandex, was the most breathable.