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*Accelerant's Minor League Baseball*

This experiment tested the effects of 4 different combustion accelerants on the velocity and distance of a baseball discharged at a 45 degree angle from a launching device. The launcher is constructed from PVC pressure rate approved pipe and the trajectory angle fixed base from plywood and metal. This experiment incorporated calculus and trigonometry to calculate velocity and distance. It involved the analysis of the chemical reactions and bonding structures of the reactants. Based upon the accelerant used in the launcher, I solved which accelerant will cause the projectile to travel further and at a greater velocity. Of the four fuels being tested, Oxy-Propane will have the greatest velocity and distance, followed by propane. Butane will have the third best launch capability; lastly hairspray (Iso butane) will have the weakest results. Based upon the data and results, Isobutane had more consistent propulsion and had amore effective distance and velocity than the others. Propane had a higher peak in some launches, but on average, was not as effective, although close, as the isobutane. Both the Oxy Propane and the butane had unsuccessful launches due to a significant lack of oxygen for the butane and the combustion which was too powerful for the PVC glue to withstand for the Oxy-Propane.