Name(s)	Project Number
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Project Title

Out of Sight! Testing Car Color Visibility in Fog

Abstract

Objectives/Goals
The purpose of my project is to determine which car color is best seen in fog. I tested these eleven
different car colors: key lime, yellow, white, silver, orange, tan, red, brown, blue, green, and black. My
hypothesis stated that red would be the most visible car color in fog.

Methods/Materials
I will test the car colors three ways: in real Tule fog for visibility, in dry ice fog for visibility, and in milk
fog for reflectivity. My experiments were designed to include an outdoor test in real Tule fog. I did this by
hanging eleven pieces of sheet metal each painted with a different car color outdoors. I then ranked the
colors as they became visible in foggy conditions at different distances. I tested the car colors indoors by
creating a fog simulation chamber. I placed small model cars, painted with the eleven colors, inside this
chamber and poured the dry ice fog into it, and then ranked the colors for visiblity as the fog sublimed.
The third test was a reflection test in a milk colloid fog chamber where each color had light reflected off
of it onto a light meter that gave me a numerical reading of reflectivity while being in a constant fog
environment created by milk and water. Each test was performed up to 20 times.

Results
In the Tule fog test, key lime, yellow, silver, and white all tied
for first place ranking. In the dry ice test, orange was the most visible. In the reflection test, white did the
best. On an overall average key lime was the most visible, because it placed in the top three rankings in
every experiment.

Conclusions/Discussion
In conclusion, the car color, key lime, performed the best in an averaged overall ranking, involving
real-world fog, very dense fog, and reflection tests in fog, making it the most visible car color in my
investigation. Also lighter colors such as: key lime, yellow, white silver, orange, tan, and red, performed
better in my investigation than the darker colors: brown, blue, green, and black. This was confirmed by a
69% correlation between the brightness of colors and my investigation results. Since many crashes happen
in fog, it is important to know which car color is best seen in fog. If something as simple as choosing a
different car color could reduce automobile accidents in fog, many lives, limbs, and vehicles could be
saved. According to my study, lighter car colors could be considered a safety feature,exspecially the color
key lime.

Summary Statement

I'm testing eleven different car colors for their visiblity in fog using outdoor Tule fog, a dry ice fog
chamber and a milk colloid fog chamber.

Help Received

Mother and father provided assistance when an extra hand was needed and mother helped tape and father
punched holes in board for security cord.