SCREWS AND LIQUIDS

HYPOTHESIS

The Damage to the screws is determined by the ph of the liquid it is submerged in.

QUESTION

How are steel screws affected by different liquids?

CONCLUSION

When I came up with my hypothesis I was thinking that the more acidic the liquid is the chemical reaction will create more damage. Turns out that is not the case as bleach is more basic than water, yet it caused some damage to the steel screws. Even so vinegar, which is acidic, caused somuch damage that it ate up a poiny in the middle of the screw

PROCEDURES

1. Drill a hole in the lid of the bottle.
2. Insert the screw through the whole and tighten it
3. Pour liquids into their bottles a little bit over half way.
4. Screw lid on to the bottle making sure the screw is submerged in the liquid.

MATERIALS

Glass bottle
Steel screws
Liquids

DEPENDANT VARIABLE

The effects on the screws

INDEPENDENT VARIABLE

Liquids in each bottle

CONTROLLED VARIABLE

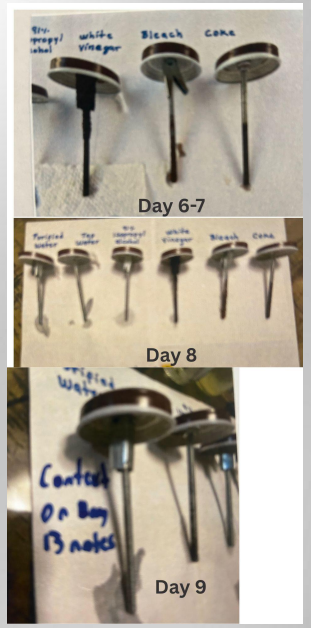
Glass bottle
Steel screws

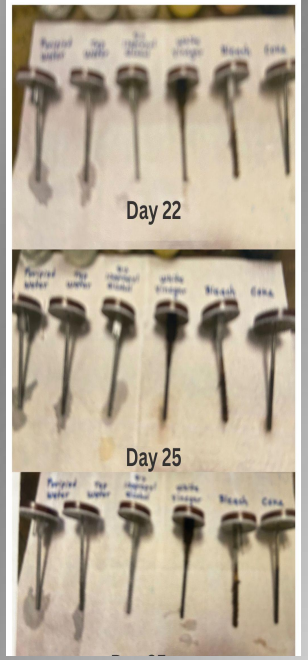
RESOURCES

NAILS(screws) AND LIQUIDS

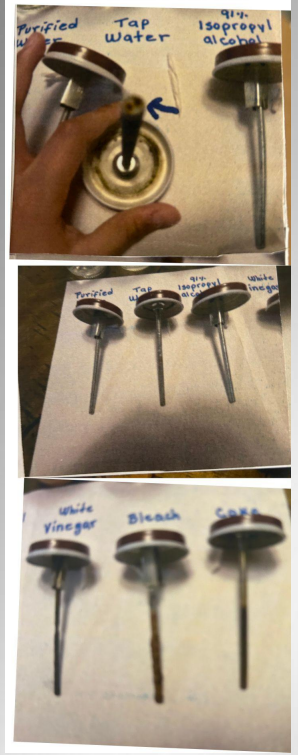
PHOTOS

We weren't able to take a picture of the 6th day





Final Photos



NAILS(screws) AND LIQUIDS

This is a data chart	Vinager	Coke	Bleach	Tap Water	91% Isopropyl Alcohol	Pure Water
Day 1	(Ox) 0.5	(Ox) 0.5	(Ox) 0.1	N/A	N/A	N/A
Day 2	(Ru) 0.7	(Ox) 0.5	(Ox) 0.15	N/A	N/A	N/A
Day 3	(Ru) 0.8	(Ox) 0.5	(Ox) 0.2	(Ox) 0.1	N/A	N/A
Day 4	(Ru) 0.9	(Ox) 0.5	(Ox) 0.25	(Ox) 0.1	N/A	N/A
Day 6-7	(Ru) 1.1	(Ox) 0.5	(Ru) 0.8	(Ox) 0.1	N/A	N/A
Day 8	(Ru) 1.2	(Ox) 0.5	(Ru) 0.85	(Ox) 0.1	N/A	N/A
Day 10	(Ru) 1.2	(Ox) 0.5	(Ru) 0.9	(Ox) 0.15	N/A	N/A
Day 12	(Ru) 1.25	(Ox) 0.5	(Ru) 1	(Ox) 0.2	N/A	N/A
Day 13	(Ru) 1.3	(Ox) 0.5	(Ru) 1.1	(Ox) 0.25	N/A	(Ox) 0.01
Day 16	(Ru) 1.4	(Ox) 0.5	(Ru) 1.2	(Ox) 0.35	N/A	(Ox) 0.01
Day 18	(Ru) 1.5	(Ox) 0.5	(Ru) 1.3	(Ox) 0.4	N/A	(Ox) 0.01
Day 20	(Ru) 1.6	(Ox) 0.5	(Ru) 1.4	(Ox) 0.5	N/A	(Ox) 0.01
Day 23	(Ru) 1.75	(Ox) 0.5	(Ru) 1.5	(Ox) 0.6	N/A	(Ox) 0.01
Day 26	(Ru) 1.9	(Ox) 0.5	(Ru) 1.6	(Ox) 0.7	N/A	(Ox) 0.01
Day 37 (Final)	(Ru) 3	(Ox) 0.5	(Ru) 2	(Ru) 0.8	N/A	(Ox) 0.01

This data chart summarizes my observations and the impact each liquid had on the steel screws.

N/A: No Damage
(Ox) Oxidation
(Ru) Rule

The numbers are my opinion on how terrible the damage is on the scale of 0-5