**Pouring Vinegar as homemade Cleaning Agent**

**Introduction**

Vinegar is a weak acid usually made by fermenting Sugar Canes or Rice. It can used as a food condiment. Because of its inherent acidity, it can soften up egg shells to the point it will turn soft and rippable. One common household Cleaning agent is Muriatic Acid which is used to clean and remove limestones from floor tiles or  walls. We intend to know if the acidity of vinegar is sufficient enough to remove limestones from floors at a cheaper cost.

**Materials**

**Hypothesis**

Vinegar is a better cleaning agent than water, but is worse than muriatic acid. This is because vinegar is a weaker acid, and thus kills less bacteria than muriatic acid, which is a diluted form of hydrochloric acid.

**Experimental Procedure**

**Data and Results**

|  |
| --- |
| **Stain Removal Data** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cleaning Agent** | **Highly Effective (stain is gone)** | **Moderately Effective (stain almost gone)** | **Slightly Effective (some of the stain is gone)** | **Ineffective (stain is unaffected)** |
| Water |  |  | x |  |
| Vinegar |  | x |  |  |
| Muriatic Acid | x |  |  |  |

According to the data, vinegar is more effective as a cleaning agent than water but is less effective than muriatic acid.

**Observation**

**Conclusion**