

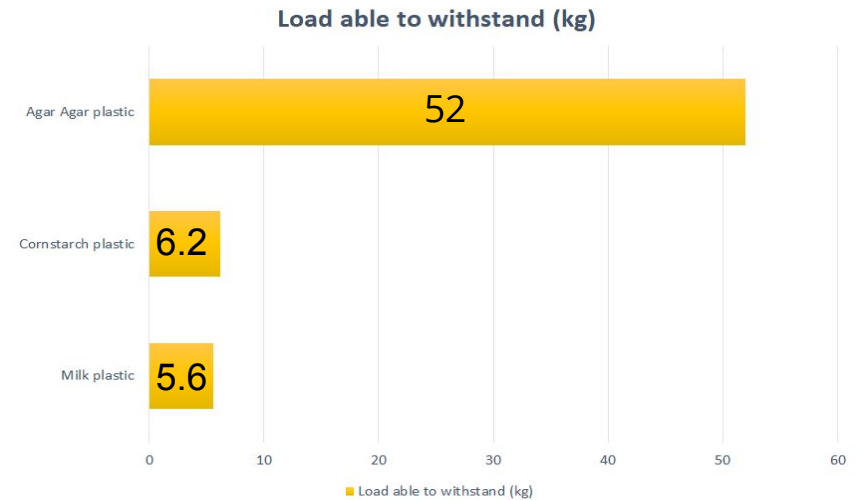
# What kind of Bioplastic is Stronger? (LS08)

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### Research Question

We want to explore different alternatives for making bioplastic which could be mass produced in the future and be sustainable in a way that does not affect the environment negatively.

### Data Analysis & Results/Findings



### Methodology

We tested the Bioplastic's strength by putting weights on them, adding 100 grams at a time, until they showed a crack, ultimately breaking. However, we realised that agar agar plastic could not break with the physical weights we used, so we used our personal body weight to determine the mass the agar agar plastic could withstand.

### Interpretation & Conclusion

Agar is a biopolymer made from agarose and agaropectin found in the cell walls of red algae from the phylum Rhodophyta. This explains why agar plastic is so strong as it is made up of 2 key principles - agarose being the "glue" in the mixture and agaropectin enhances the agarose or "glue", making agar plastic difficult to tear or break. Agarose is the component responsible for the high-strength gelling properties of agar, while agaropectin provides the viscous properties.