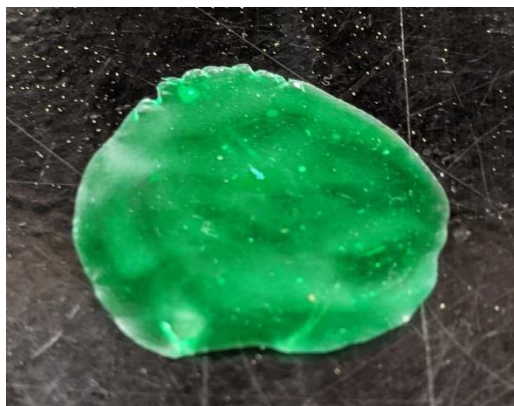


HAHS Bioplastics (August 17, 2021)

Note to Students

- Plastic is everywhere in our world! From disposable plastics, like plastic forks and spoons, to reusable plastics, like parts of your computer, plastic is a major part of our lives.
- Because we use plastic so much, it is important that we work to use plastic that comes from better sources than traditional plastic, which comes from mined oils and fuels. It is also useful to use plastics that can break down on their own without adding dangerous chemicals.
- One way to improve our plastic making process is to make bioplastics, which are made from polymers that are found mostly in plants and can usually break down on their own.
- Bioplastics are not perfect, but they do come from a renewable source and are generally less toxic than normal plastics. They also can usually be broken down on their own.
- Today, we are making three different bioplastics at home! One will come from cornstarch, one will come from tapioca starch, and one will come from agar- which is found in seaweed.



Note to Parents

- We all use plastic on a daily basis in our lives. While this comes in many different settings and forms, it doesn't change how critical this material has become for all of us.
- Traditional plastics are petroleum-based, which can have negative health and environmental impacts at every stage of their lifecycle.
- Bioplastics are just one alternative to traditional plastics, but at the very least, they offer a less toxic, degradable, and more sustainably-sourced intermediate as we continue to develop better materials.
- Bioplastics come from the sugar polymers found in plants which are readily available and easily accessible.
- Today, we are making 3 different types of bioplastics. These plastics, which are formed from corn starch, tapioca starch, and agar, are representative of the types of plastics that are now being made on industrial scales. (*Please note we are using a stove to heat things today thus adult supervision is highly recommended!)