**Scientific Paper**

**Idonella Sakaiensis, el futuro del mundo.**

Idonella Sakaiensis, worlds future.

 Diego Cubillo

**Resumen**

 La cantidad de plástico en los océanos, ha aumentado mucho, y esto es un gran problema, porque muchos animales marinos están muriendo cada día, y tenemos que detener esto, porque si no nos detenemos, como dicen muchas investigaciones científicas, el océano estará lleno de plástico y casi toda la flora y fauna morirá. Hay una bacteria que puede ayudar a resolver este problema, se llama Idonella Sakaiensis. Esta bacteria puede comer plástico PET, que es uno de los tipos de plástico más comunes. Cuando este microorganismo come plástico, libera algo de CO2 que no es bueno en absoluto, pero que puede ser resuelto con algunas plantas. Este descubrimiento científico puede ayudar al problema del océano, porque si aumentamos la cantidad de plástico reciclado, llegará menos plástico al océano, y si llega menos plástico al océano, será más fácil limpiarlo.

***Palabras claves***: Bacteria, plástico, océano, biotecnología, medioambiente, contaminación.

**Abstract**

The amount of plastic on oceans, have increased a lot, and this is a huge problem because lots of marine animals are dying every day, and we need to stop this, because if we don’t stop, as many scientific investigations say, the ocean will be plenty of plastic and almost all the flora and fauna will die. There´s a bacterium that can help solving this problem, it is called Idonella Sakaiensis. This bacterium can eat PET plastic, which is one of the most common types of plastic. When this microorganism eat plastic, release some CO2 which is not good at all, but that can be solved with some plants. This scientific discovery can help ocean problem, because if we increase the amount of plastic recycle, less plastic will reach the ocean, and if less plastic reach the ocean, will be easier to clean it.

***Keywords*:** Bacterium, plastic, ocean, biotechnology, environment, pollution.

**Body Structure-------Development/Desarrollo**

* **Introduction**

Did you know, that there is a bacterium, that can decompose a specific type of plastic? This bacterium is called, Idonella Sakaiensis and can live by eating plastic. This bacterium was found in a dump, and after some investigations, the Scientifics discovered that this bacterium can convert PET plastic into carbon dioxide. There is only one thing we need to do, think how to eliminate that CO2. If this bacterium is implemented to our daily life, less animals will die and the ocean may be clean again.

* **Problem:**

During the last years, the amount of plastic produced has increased and also the amount of plastic thrown to oceans. With this increase, the ocean has more and more trash, every year. This is killing the flora and fauna and we do not release, the damage we are doing to the environment. Every year, we produce more than 400 thousand tons of plastic and every year this number increase significantly. Only a 9% of this number is recycled, and 8 million tons of plastic reach the ocean every year, that is the same as 200 kilograms per second wasted on the ocean. Hundred thousand of ocean mammals and 1 million of seabirds die eating, tangled or suffocated by plastic pollution on oceans every year. All this figures in a single year. If we don’t stop this right know, in few years the ocean will be full of plastic.

* **Methodology**

Do you know, that every type of biotechnology has a color? Well, in this case is Environment Industry and the color is green. For decomposing of PET plastic whit this bacterium, we need to follow some steps, and they are a little bit expensive. The first step and maybe the most important, is to find this bacterium. They can be found in plastic recycling centers, because with the time, bacterias adapt to almost any condition. The second step is to separate PET plastic from other types of plastic. For this process there are variety of options, but the most efficient are very expensive. Finally, all the PET plastic should be put in a specific place and with a certain temperature, and then put the bacteria and should decompose with the time the plastic. This system it is very interesting and could help a lot to the environment, but needs to be improved, because now a day is too expensive.

* **Solution**

Nowadays, the best way to decompose plastic, is by microorganisms and biotechnology. Scientifics are working for improving this system, but it will be the best way to get rid of plastic. These bacteria work by eating PET plastic and then they liberate CO2. For this process it would be need some special laboratories, and making a good system this will be the future of the environment. Follow all the news of Scientifics about this bacterium, because in few more years, this will be a normal process.

**References/referencia:** <https://es.wikipedia.org/wiki/Ideonella_sakaiensis>, <https://www.microbiologyresearch.org/content/journal/ijsem/10.1099/ijsem.0.001058>, <https://www.elmundo.es/ciencia/2016/03/10/56e1c141e2704e7a6a8b4629.html>