

## Disclaimer

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## Introduction

We are glad to introduce to you a new and interesting project which is meant to help you obtain oil or fuel from any kind of plastic leftovers. It is a system that solves two problems at once: the fuel crisis and pollution.

By processing plastic leftovers, we can generate more energy than we consume, so it is much more efficient and eco-friendly. So why should we live surrounded by garbage when we can recycle it and turn it into something useful and efficient?

A synthetic combustible is the type of fuel obtained from plastic bottles or any type of plastic leftovers that have been made of petroleum or earth oil. Turning plastic into hydrocarbons like biodiesel, gasoline, kerosene or methane is the reversible process of transforming oil into plastic. This type of fuel has been used for some time on a large scale in countries like Ireland, Germany and Japan, but this technology hasn't been available for small producers until now.

This process is relatively simple. The plastic leftovers melt in a receptacle until they eliminate gas through a catalyst, which is captured and chilled into a liquid, like water. This thermic process turns the long molecular chains into short molecular chains. The

result is a mix of different components: 75% diesel, 15% gas and 4-5% ashes (waste). It depends what type of plastic materials you are using.

An effective process of distillation is using water to chill the resulted gases. Oil refineries use expensive catalyzers, which are not available for small producers, but now you can use a much simpler and cheaper method.

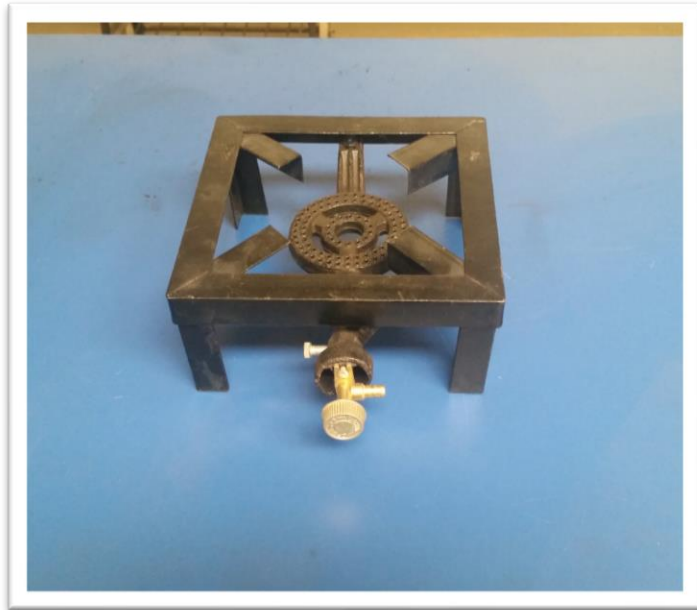
You can use any type of plastic, rubber or used oil without sorting them. The efficiency of this system is about 80% for plastic, 90% for used oils and 45% for rubber.

Instead of burning all these leftovers, which causes serious damage to the environment by producing high levels of CO<sub>2</sub>, you can turn all of them into fuel.

## Required Materials

Here are the materials we will need for this project:

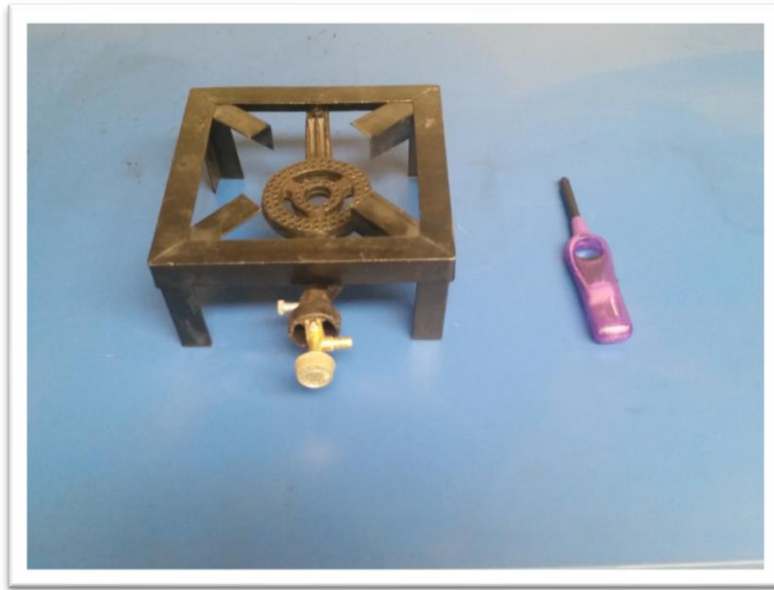
- a gas burner



- a gas cylinder with a fuse connected to the gas burner



- a kindler to start the fire in the burner



- a 20-liter stainless steel pot or any receptacle of this kind



- a cooking plate in case you don't have a gas burner, but it is much more efficient using gas
- a pressure cooker or any other cooking pot that has an air tight cap



- a bottle or a jar for water



- a copper pipe that will make the connection between the distillation pot and the water where the fuel will condense



- You will need some sand. The distillation pot will be covered in sand in order to maintain a proper level of heat inside the pot.



- and lots of PET plastic bottles. There are plenty of them all over the place.





## Step-by-Step Instructions

You won't need too many tools for this project, but I'll mention all specific tools you might require.

First, we will place the distillation pot (pressure cooker) inside the 20-liter stainless steel pot and pour sand all around it.

Pour some sand on the bottom of the main pot, and then place the pressure cooker inside and continue to gently pour sand all around it until it covers the pot entirely.



We will now place the stainless-steel pot on the gas burner and adjust the cap.



For this we will remove one of the valves and then connect the copper pipe to it. During the boiling process (in which we will melt the plastic bottles), the vapors will go through the copper pipe and reach the jar filled with water.

We won't need any fittings, because this system doesn't require a perfect seal.



There will not be high pressure inside the distillation pot, so we will just need an open gate so that the melted plastic vapors can reach the water jar. The only thing you should know is that it's best to use a metal receptacle.

You can use a pair of tings to remove one of the valves of the pressure cap. You can see what it looks like in the included image.

We will now assemble the copper pipe on the cap, which will communicate with the water jar to eliminate the gases generated by the boiling plastic bottles.

You'll need a fitting to attach the cooper pipe to the cap. Remember that you don't need a perfect seal; just make sure that

the gases will go out through the copper pipe and reach the water jar and not lose anything during this process.

Further on, we will prepare the materials in order to produce oil and fuel. Plastic is made of petroleum or earth oil and the process is reversible. We will fill the jar with water and start cutting the plastic bottles and place them inside the receptacle.

You can use any plastic bottles you can find. You'll just need to cut them into small pieces so that they can be placed inside the pot. You can also use plastic bags or any plastic leftovers.

We'll also need a thermometer. (I usually use an infrared thermometer) to measure the temperature of the sand during the boiling process.

We can now fasten the cap on the pot and place the other end of the copper pipe into the water jar. Fill the jar half full with water, otherwise it won't be efficient.

We also use silicon grease to seal the pipe a little bit. Use silicon that can bear high temperatures. In case you don't have silicon, you can use dirt or water with flour to seal the fitting. Now that everything is assembled, we only have to turn on the gas burner.

This is how everything should look in the end.



Once the plastic starts melting, it will vaporize and eliminate gases through the copper pipe and reach the water jar where it will turn into oil/fuel.

We'll have to wait until the melting process begins and refill the container with plastic a few times.





**The efficiency of this system is about 75-80% considering that we use 25% of the energy to generate/obtain oil/fuel.**

Using 1 kg of plastic, we can get about 70% fuel.

We have reached the vaporizing temperature after adding some more plastic. You will notice a yellow liquid at the surface of the water. After a while, the fuel layer is more visible in the water jar.



When it reaches the burning point, this is the result...**fuel!**

## Conclusion

Finding a cheap and efficient source of power is what each of us are looking for in order to reduce costs. So why not help preserve our environment and our natural resources at the same time?

Great minds think alike, and that is why you are here. This is the best opportunity for you to get involved and become a friend of the environment. Not to mention the fact that you will be able to save some money. That's what we are all aiming for!

As you have already seen, this system doesn't require a massive cash investment and it's very easy to build. You just need to follow the simple steps described in this short eBook and in the videos to build your own BioPET system.

We really hope you've enjoyed this project and, most of all, that you have managed to build it successfully in your own backyard. Just follow the guidelines and you are good to go!

**Good luck!**