



# The Use of Bacterial Transformation in the Degradation of Plastics



PETE:  
Polyethylene  
Terephthalate

- One of the most common pollutants
- One of the most commonly used plastics in general





PETE is found in plastic bottles, microwaveable trays. Synthetic clothing, insulation, and more. Many believe that we wouldn't be able to cope if plastic was to be removed from our world.



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# Ideonella Sakaiensis

Very few needs  
Thin film/42 days

A top-down view of a petri dish containing a red agar medium. The dish shows several bacterial colonies. On the right side, there is a dense, fan-shaped array of colonies, likely from a streaked inoculation. On the left side, there are several smaller, distinct, circular colonies, likely from a spread plate inoculation. The colonies appear as small, white, opaque dots against the red background.

Bacterial  
Transformation:  
A simple process?

- Cheap to make
- Relatively quick to make
- Same process as PETase

