



# Fuels From Plastics

## FUEL PRODUCTION BY THERMAL CRACKING OF WASTE PLASTICS

### KEY WORDS

PLASTIC WASTE  
VALORIZATION,  
THERMAL CRACKING,  
WASTE-TO-FUEL  
TECHNOLOGY

### DESCRIPTION

Bench-scale thermal cracking (non-catalytic) process for liquid/gas fuel production from waste plastics. This technology offers an alternative for waste plastic disposal, yielding a fuel-like product (hydrocarbon cut). It is especially suited for contaminated plastics from herbicide/oil containers that are difficult or impossible to recycle by mechanical technologies. The cracking product is composed by a liquid fraction (paraffins, olefins, naphthenic, aromatics), a non-condensable flammable gas fraction and a small amount of solids residues (ash).

### POTENTIAL BENEFITS OR IMPACTS

Wide spectrum of operating conditions.  
Degradation/destruction of the contaminant by exposure at high temperature.

### TECHNOLOGY MATURITY LEVEL (TRL)

TRL 9: system proven and operational in a real operating environment.

### AREA OF APPLICATION

Waste plastics: HDPE, LDPE, PP, PS

### CONTACT US

[mpedernera@plapiqui.edu.ar](mailto:mpedernera@plapiqui.edu.ar)

[eadrover@plapiqui](mailto:eadrover@plapiqui)

[elopez@plapiqui.edu.ar](mailto:elopez@plapiqui.edu.ar)

[Universidad Nacional del Sur](http://Universidad Nacional del Sur)