



# Poly- hydroxyalkanoates PHAs

## BIOSYNTHESIS OF POLYHYDROXYALKANOATES AND COPOLYMERS

### KEY WORDS

BIOPOLYMER  
BIOSYNTHESIS,

BIODEGRADABLE  
THERMOPLASTICS,

MICROBIAL POLYMER  
PRODUCTION

### DESCRIPTION

PHAs are thermoplastic polyesters produced as carbon and energy sources by several microorganisms. Different copolymers are obtained by using autochthonous strains and several low-cost carbon sources (starch, glycerol, lignocellulosic residues, among others).

### POTENTIAL BENEFITS OR IMPACTS

Low-cost production by using autochthonous strains and cheap carbon sources

Biodegradable thermoplastic polymers with good mechanical performance

### TECHNOLOGY MATURITY LEVEL (TRL)

TRL 4: laboratory validation.

### AREA OF APPLICATION

Food packaging

Biomedical supplies

Pharmaceutical products

### CONTACT US

[olivia\\_lopez@plapiqui.edu.ar](mailto:olivia_lopez@plapiqui.edu.ar)

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

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