

TYPES OF PLASTIC AND MICROPLASTICS

OVERVIEW

PLASTIC VARIES, DEPENDING ON
WHAT IT IS USED FOR

SOME IS FLEXIBLE, SOME IS RIGID

TYPES OF PLASTIC



PET

POLYETHYLENE
TEREPHTHALATE



WATER BOTTLES,
JARS, CAPS



HDPE

HIGH-DENSITY
POLYETHYLENE

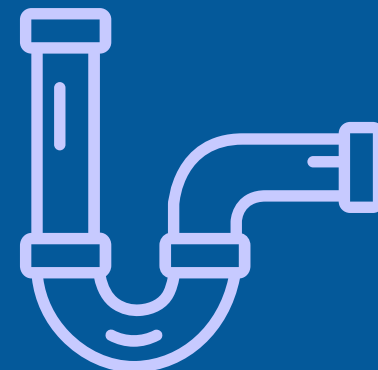


SHAMPOO
BOTTLES,
GROCERY BAGS



PVC

POLYVINYL
CHLORIDE



CLEANING
PRODUCTS,
SHEETINGS, PIPES



LDPE

LOW-DENSITY
POLYETHYLENE

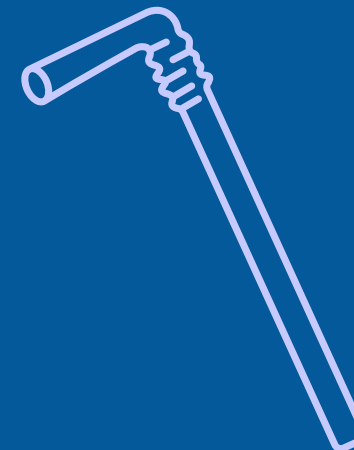


BREAD BAGS,
PLASTIC FILMS

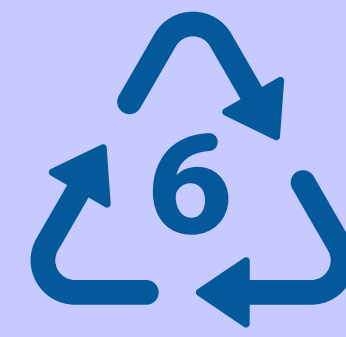


PP

POLYPROPYLENE



YOGHURT CUPS,
STRAWS,
HANGERS



PS

POLYSTYRENE

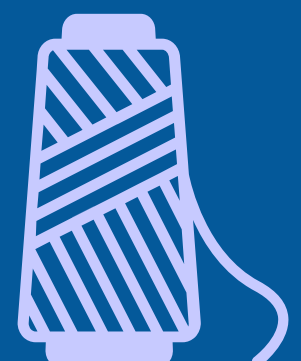


TAKE-AWAY AND
HARD
PACKAGING



OTHER

OTHER



BABY BOTTLES,
NYLON, CDS

HOW DOES THIS RELATE TO THE PLASTIC RECYCLING MACHINES?

- WE NEED TO SORT THE PLASTICS INTO SPECIFIC PLASTIC TYPES
- MOSTLY WE USE PLASTIC TYPE 2 (HDPE) AND TYPE 4 (LDPE)
- IT IS IMPORTANT TO SORT THEM BECAUSE THEY HAVE DIFFERENT MELTING TEMPERATURES



HDPE

**HIGH-DENSITY
POLYETHYLENE**



LDPE

**LOW-DENSITY
POLYETHYLENE**

HOW DO WE TELL THEM APART?

- OFTEN THEY ARE MARKED ON THE INSIDE OF THE LID
- LDPE (4), TEND TO BE MORE FLEXIBLE THAN HDPE (2)
- LIDS MADE UP OF LDPE (4) TEND TO BE FOUND ON MILK BOTTLES, HDPE (2) LIDS ARE FOUND ON SOFT DRINK BOTTLES



HARDER LIDS
FROM SOFT
DRINK BOTTLES

HIGHER
MELTING TEMP



MORE FLEXIBLE
MILK BOTTLE
LIDS

LOWER
MELTING TEMP



BUT SOME PLASTICS CAN ALSO BE MIXED TOGETHER

**SOMETIMES IT IS HARD TO TELL WHICH TYPE OF PLASTIC IT IS,
ESPECIALLY IF IT'S NOT MARKED, OR HAS BEEN WEATHERED
WHILE IN THE OCEAN**

**IT'S OKAY IF THEY DO GET MIXED UP SOMETIMES, BUT IF WE
CAN AVOID MIXING THE PLASTIC TYPES, THE MACHINES WILL
WORK BETTER**

DISCUSSION POINTS

**WHAT OTHER TYPES OF PLASTICS ARE
COMMON?**

**WHAT OTHER TYPES OF PLASTIC MAY
WORK IN THE PLASTIC RECYCLING
MACHINES?**

WHAT ARE MICROPLASTICS?



DEFINITION OF MICROPLASTIC

PLASTIC LESS THAN 5_{MM}

TYPES OF MICROPLASTIC

PRIMARY MICROPLASTIC

PLASTIC PIECES THAT WHEN
PRODUCED ARE <5MM



NURDLES

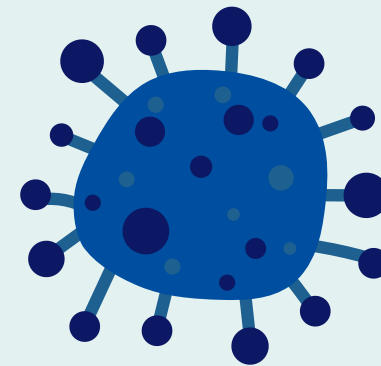
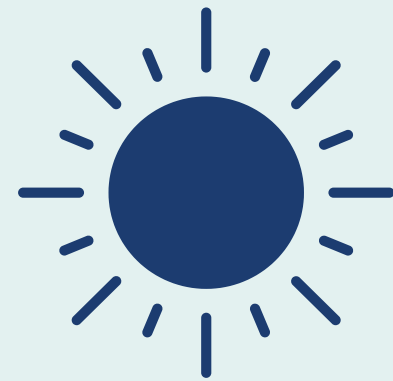


SECONDARY MICROPLASTIC

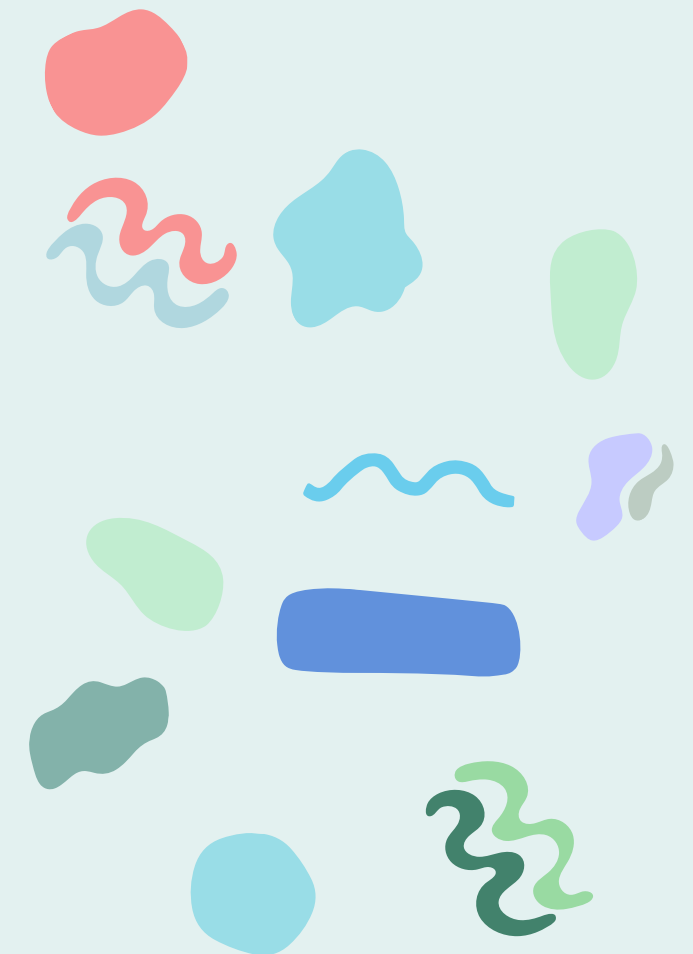
PLASTIC PIECES THAT BREAKDOWN
INTO MICROPLASTICS



MICROPLASTIC DEGRADING



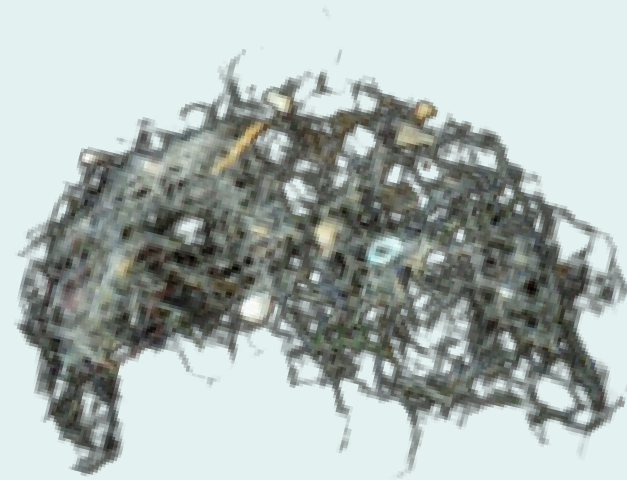
UV-DEGREATION (SUN)
MECHANICAL-DEGREATION (E.G. WAVES)
BIO-DEGREATION (E.G. MICROBES)



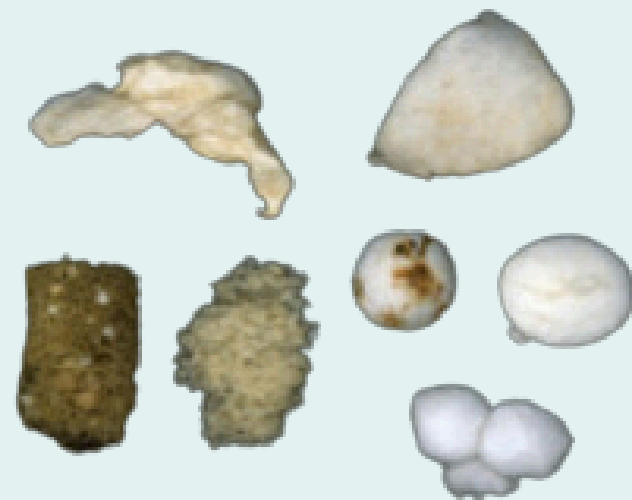
TYPES OF MICROPLASTICS FOUND



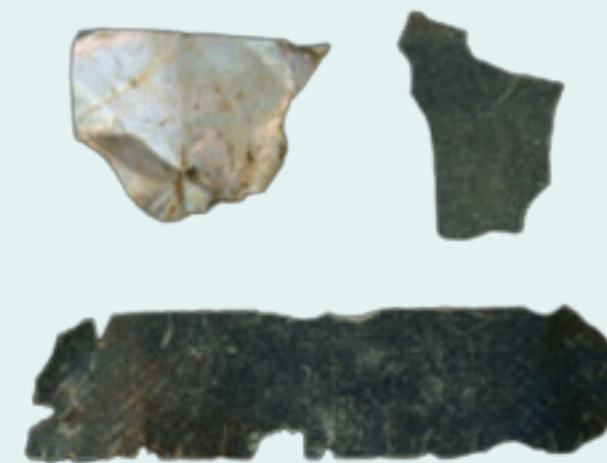
FRAGMENTS



FILAMENTS



FOAM



FILM



PELLETS

MICROPLASTIC IN THE ENVIRONMENT

MICROPLASTICS ARE EVERYWHERE, THEY HAVE BEEN FOUND IN THE MARIANA TRENCH,
ANTARCTICA, AND EVEN IN THE CLOUDS...



MICROPLASTIC ON THE BEACH IN WANUWUY (CAPE ARNHEN) AND DHAMBALIYA (BREMER ISLAND)

HOW MICROPLASTICS AFFECT YOUR HEALTH



PRACTICAL: SORT PLASTICS INTO DIFFERENT GROUPS

- 1. SORT INTO COLOURS**
- 2. SORT INTO PLASTIC TYPES (2 AND 4)**

**CALL TO ACTION:
KEEP COLLECTING PLASTIC**

**PLEASE CONTINUE COLLECTING PLASTIC
BOTTLE LIDS, BREAD TAGS ETC.**