
Ministero delle Imprese
e del Made in Italy
SAPER(e)
CONSUMARE
★ VINCITORE ★
2025

SAPER(e) CONSUMARE

VINCITORE

★ 2025 ★



★ *Vincitori* ★

Ministero delle Imprese
e del Made in Italy


ESSERE SOSTENIBILE
PER ESSERE
ALLA MODA

Il peso delle scelte...



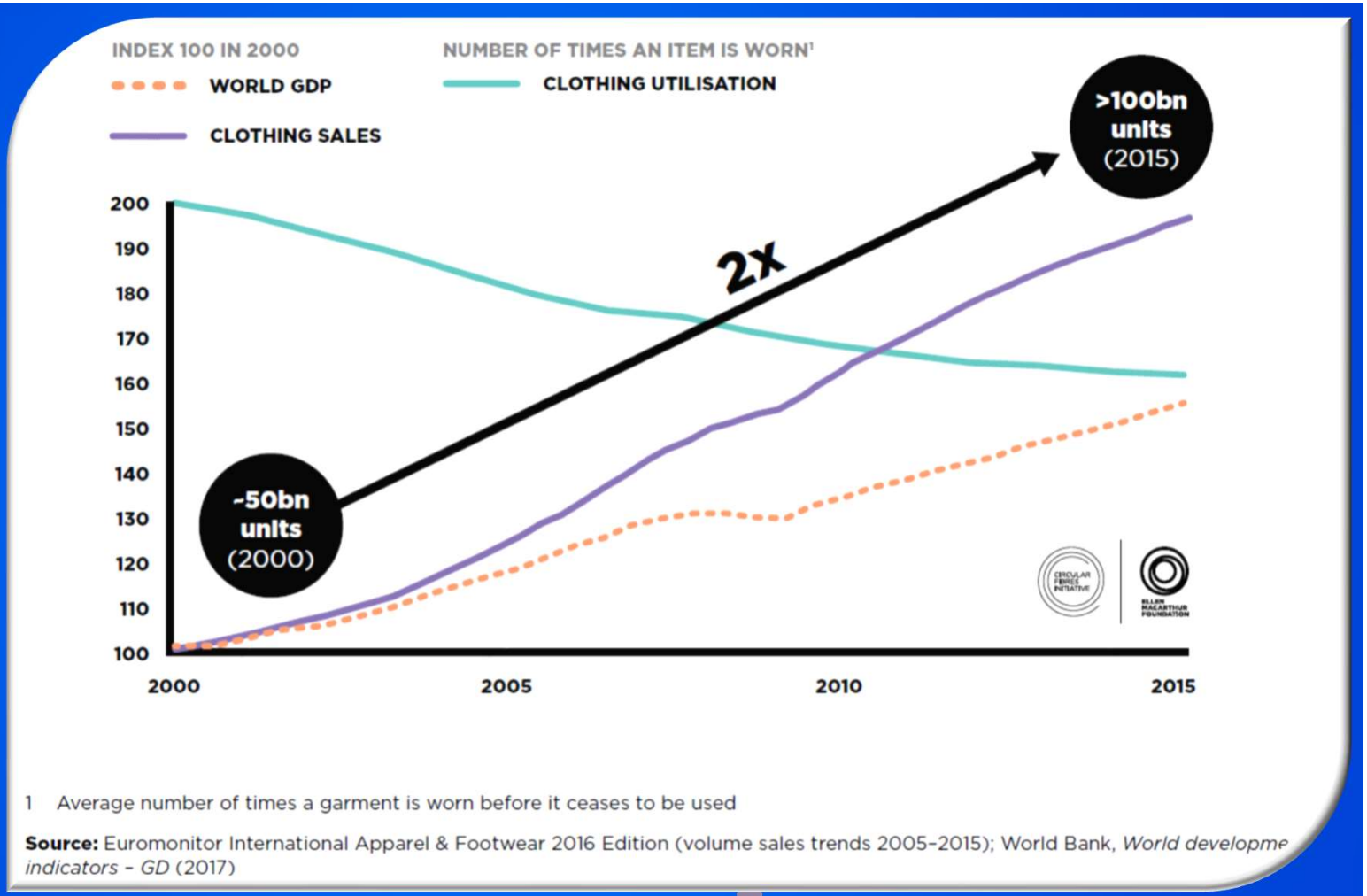


Moda

Sostenibilità



Fast fashion vs clothing utilization



1 Average number of times a garment is worn before it ceases to be used

Source: Euromonitor International Apparel & Footwear 2016 Edition (volume sales trends 2005–2015); World Bank, *World developme indicators – GD* (2017)

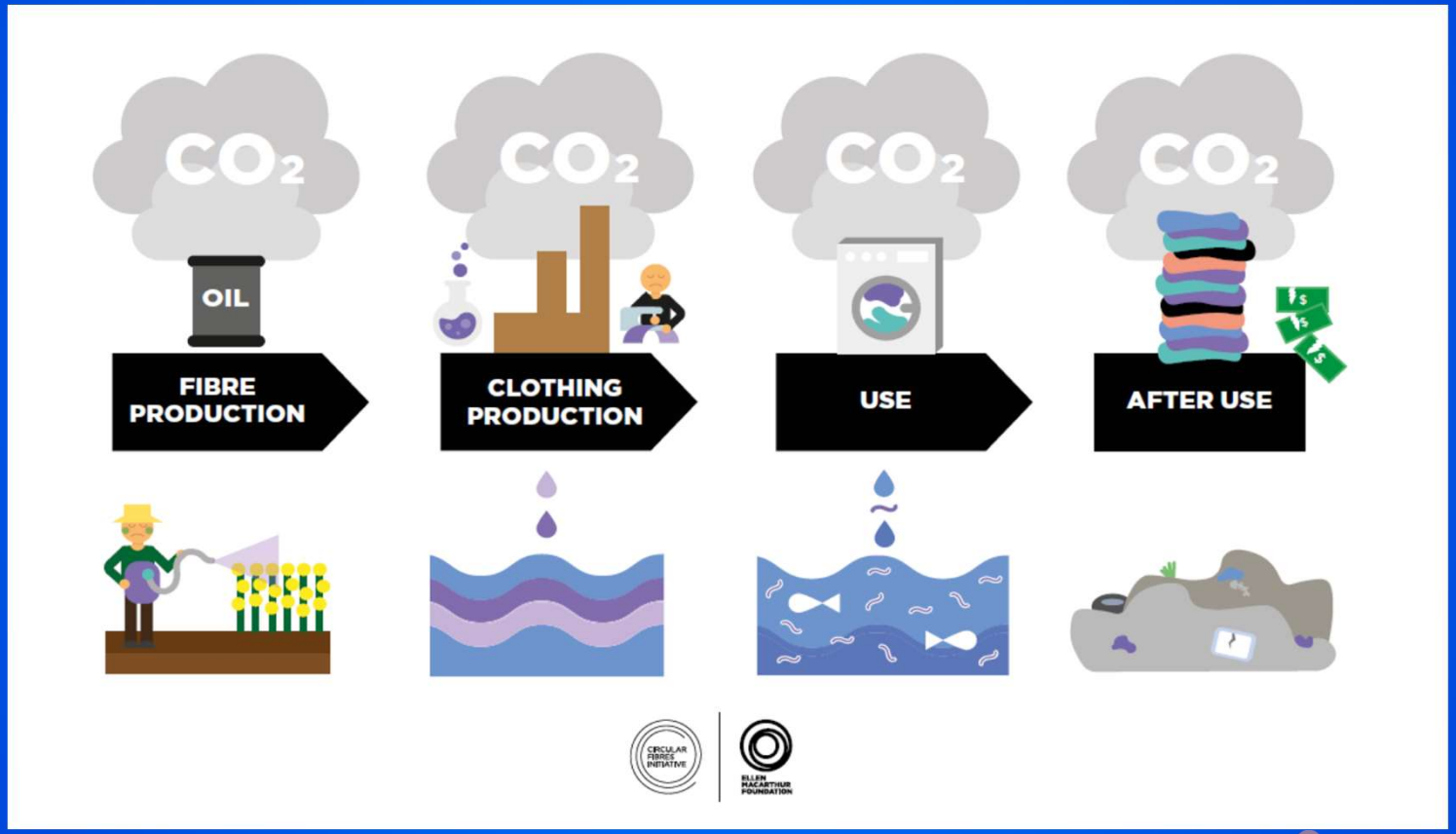
IMPATTO SOCIO-ECONOMICO







Impatto ambientale



L'IMPATTO AMBIENTALE DELL'INDUSTRIA TESSILE

Consumo di acqua:
2.700 litri d'acqua per produrre una sola maglietta



Emissioni di CO_2:
10% delle emissioni globali di carbonio

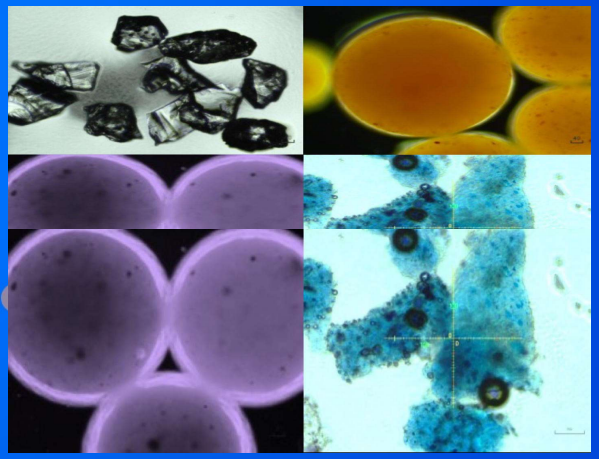




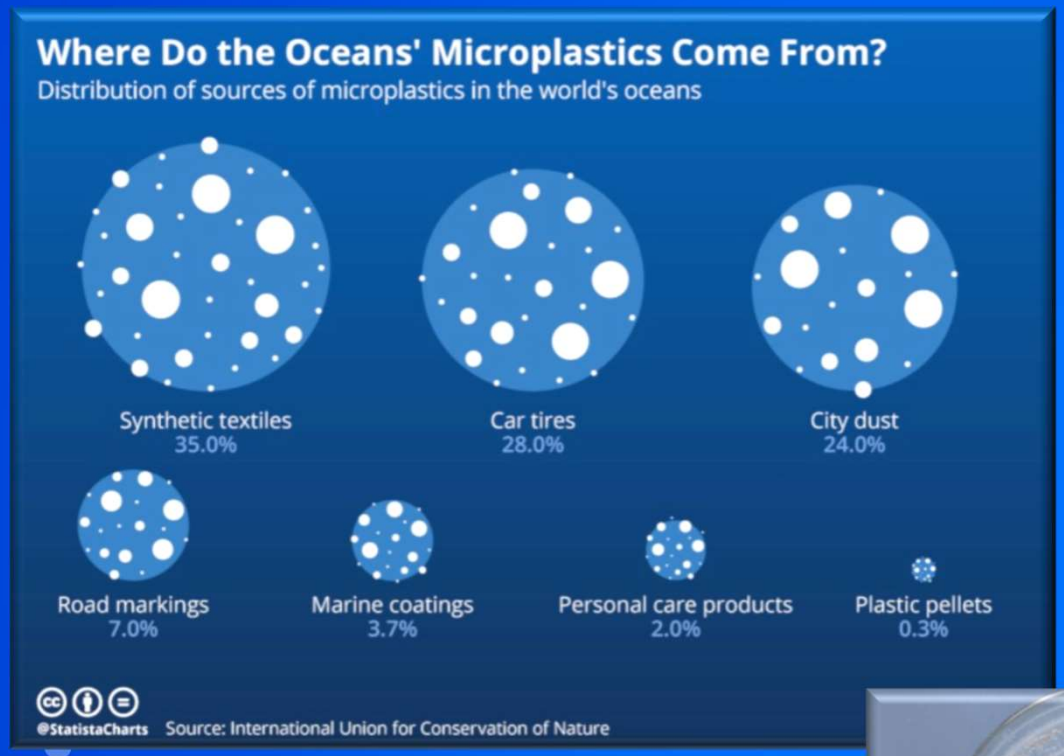
Rifiuti prodotti:
300.000 tonnellate l'anno di vestiti dismessi

Continuando
la fase di formazione...





Microplastiche osservate al microscopio ottico

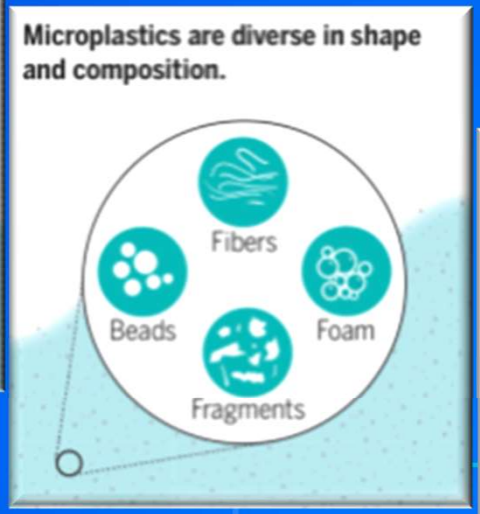


L'industria tessile è tra i maggiori responsabili della presenza di microplastiche nell'oceano.

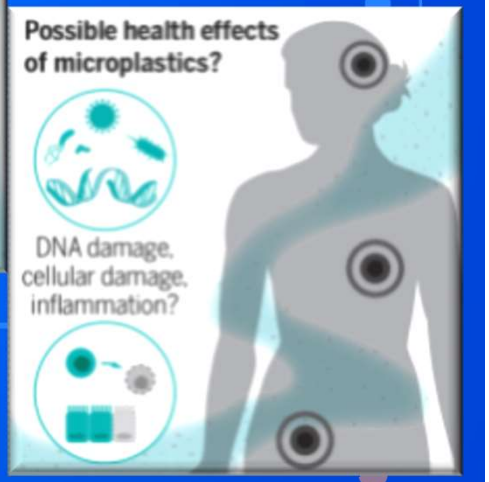


Fonti di microplastiche e possibili effetti sulla salute







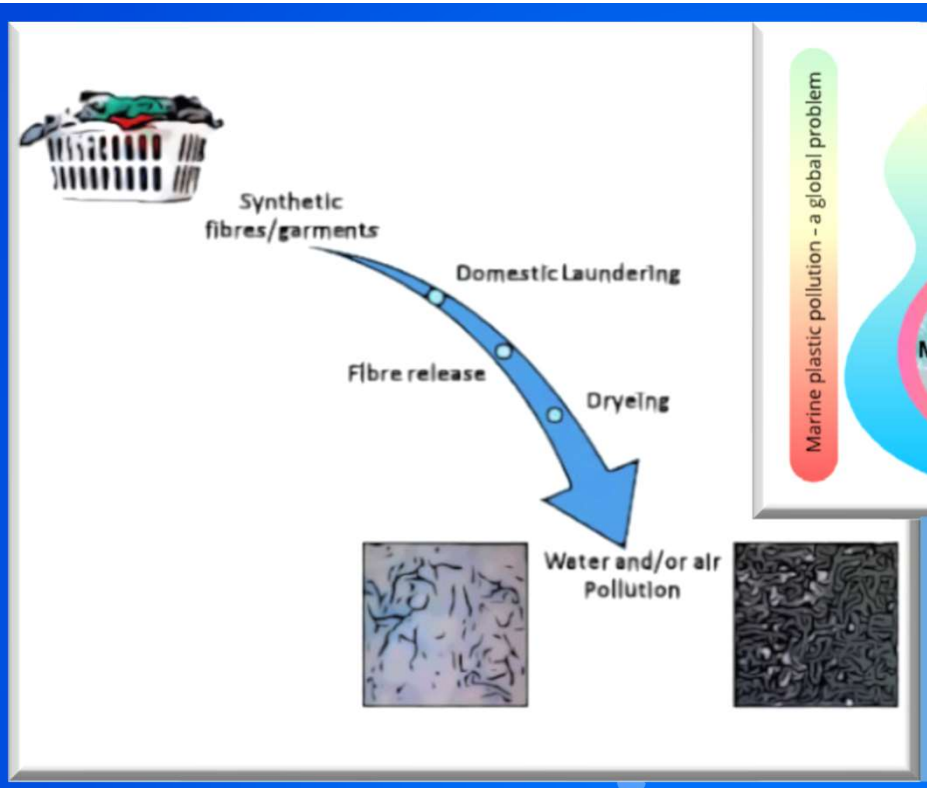


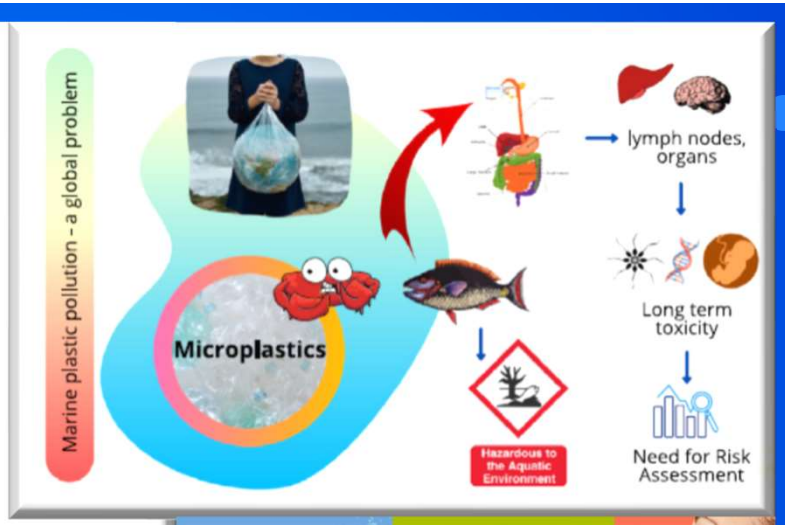

Science

Microplastics and human health

A. Dick Vethaak and Juliette Legler

Science 371 (6530), 672-674.
DOI: 10.1126/science.abe5041







Le microplastiche nella catena alimentare



Campione di plancton (Mediterraneo).



Microplastiche in un pesce - The 5 Gyres Institute.



International Journal of
Environmental Research and Public Health

Review

A Detailed Review Study on Microplastics in Human Health

Claudia Campanale *, C
Vito Felice Uricchio

Water Research Institute-Ital
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* Correspondence: claudia.c

Received: 29 December 201

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ELSEVIER

Review

Human health concerns regarding m From marine to food systems

Zhihao Yuan *, Rajat Nag, Enda Cummins

UCD School of Biosystems and Food Engineering, University College Dublin, Belfield, Dublin 4, Ireland

Effects of Microplastics on Fish a Human Health

Md. Simul Bhuyan [1,2]*

[1]Bangladesh Marine Fisheries Association, Dhaka, Bangladesh, [2]Institute of Marine Sciences, Faculty of Ma Fisheries, University of Chittagong, Chittagong, Bangladesh

J Food Sci Technol (May 2020) 57(5):1601–1608
https://doi.org/10.1007/s13197-019-04138-1

Check for updates

AFSTi Empowering food professionals

REVIEW ARTICLE

Microplastics: an emerging threat to food security and human health

Gabriel Enriqu

Journal of Medical Toxicology (2018) 14:117–119
https://doi.org/10.1007/s13181-018-0661-9

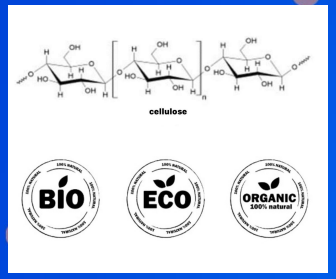
EDITORIAL

CrossMark

Microplastics and Human Health: Our Great Future to Think About Now

Amy V. Kontrick [1]

Received: 16 April 2018 / Accepted: 17 April 2018 / Published online: 23 April 2018
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SCOPO DEL PROGETTO

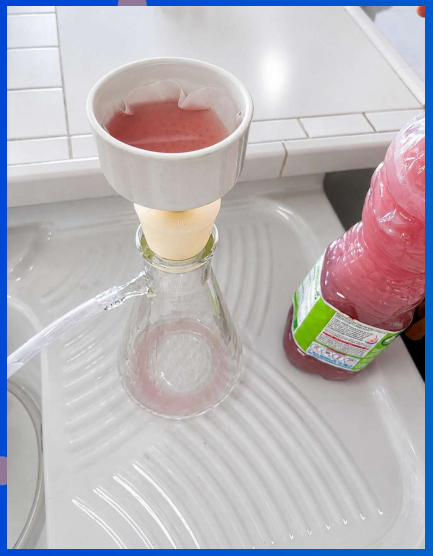
produrre una **FIBRA**

- A basso impatto ambientale
- A basso impatto sulla salute umana
- Che non sfrutti il suolo
- A ridotto utilizzo di sostanze chimiche



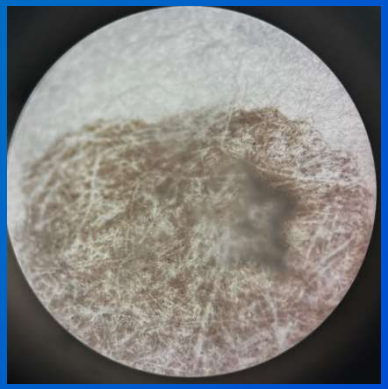

FASE
LABORATORIALE

Microplastiche nell'acqua di scarico della lavatrice



- Campionamento delle acque di scarico della lavatrice
- Filtrazione e recupero delle fibre
- Analisi gravimetrica
- Analisi microscopica delle fibre





Isolamento, screening e identificazione fenotipica dei batteri produttori di cellulosa













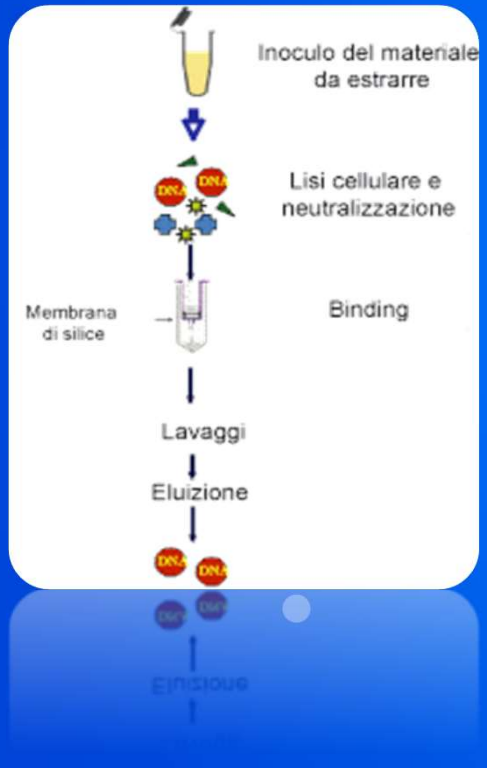


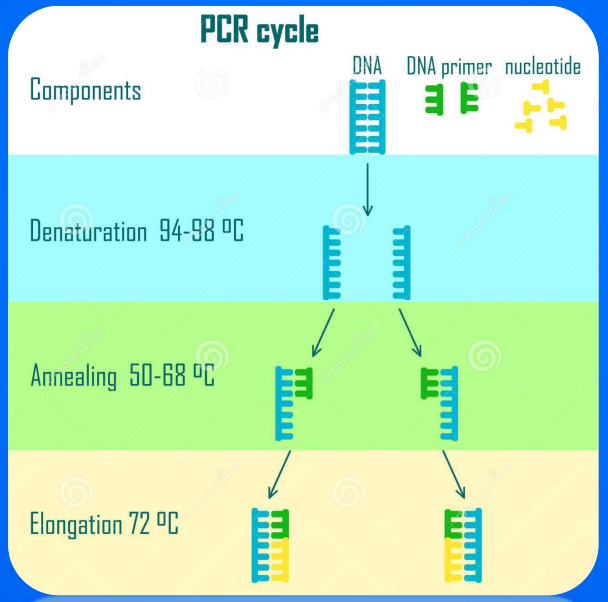


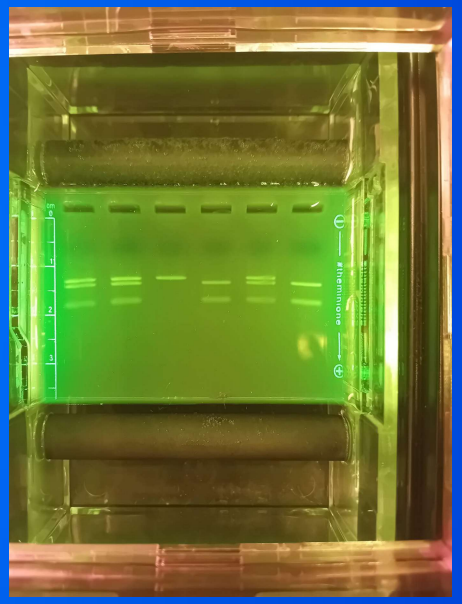


Identificazione genotipica dei batteri

Individuazione del gene responsabile della produzione di cellulosa tramite PCR







Geni 16S dell'rRNA e bcsA1

Attività condotte in collaborazione con l'Università di Bari

Produzione di cellulosa dai sottoprodotti e scarti della filiera agro-alimentare





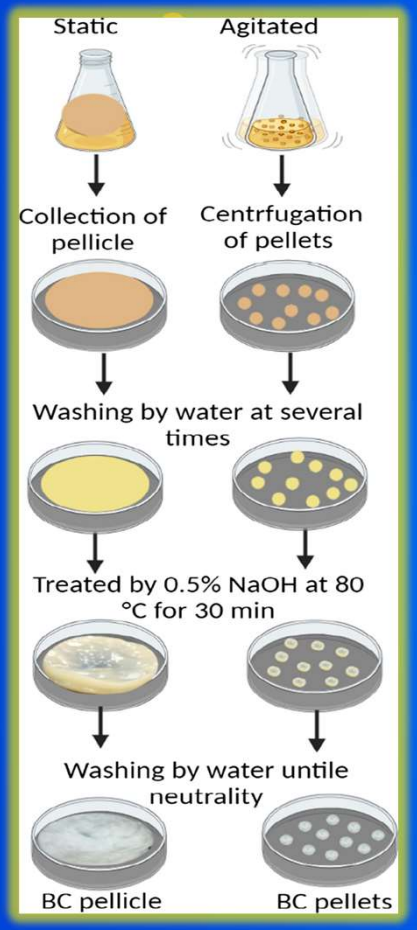
Preparazione del substrato di coltura frullando gli scarti di frutta con 2 parti di acqua

Filtrazione e controllo del pH

Incubazione e fermentazione con i batteri isolati

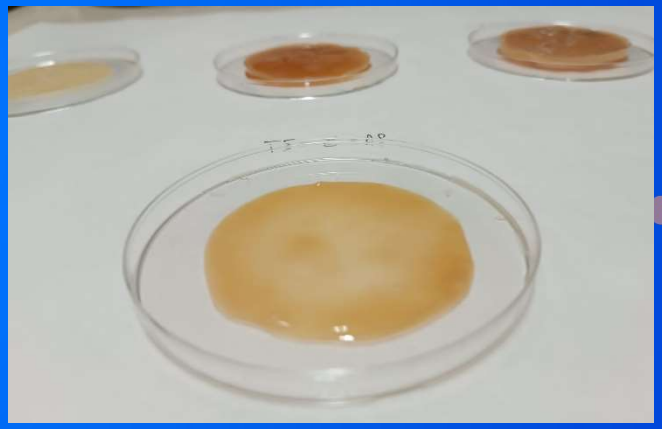
Osservazione della cellulosa prodotta

Caratterizzazione della cellulosa batterica



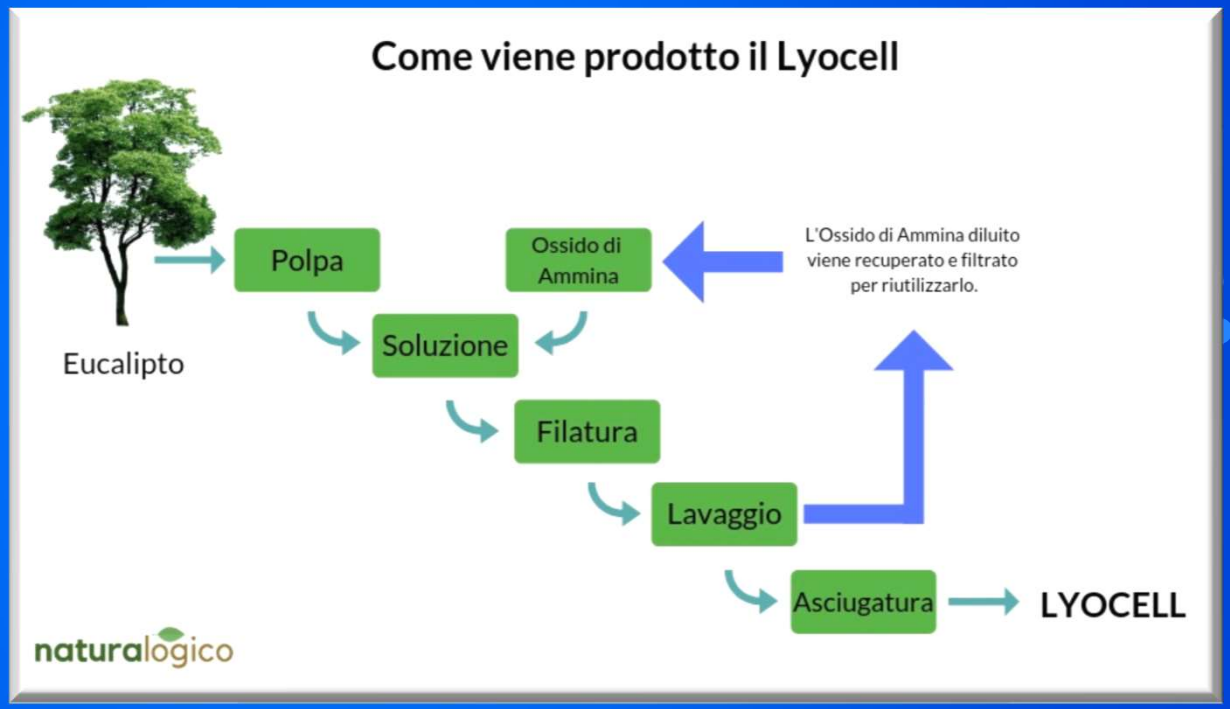
- Purificazione della cellulosa
- Capacità di ritenzione idrica
- Verifica della purezza





Produzione di fibre in cellulosa

- Dissoluzione con N-ossido di N-metilmorfolina monoidrato (NMMO)
- Filtrazione
- Rigenerazione
- Lavaggio e asciugatura



Produzione di fibre in cellulosa in laboratorio

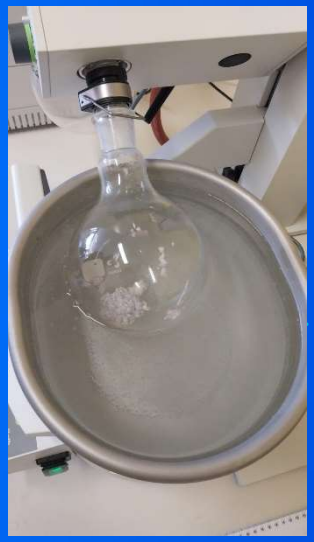
- Dissoluzione con

N-ossido di N-metilmorfolina

monoidrato (NMMO)

- Filtrazione
- Rigenerazione






GRAZIE