

Haelixa

Promoting sustainability and product safety through DNA-based tracers

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Spinoff

ETH zürich

Do you trust the label?



One of these t-shirts is made with 100% organic cotton.

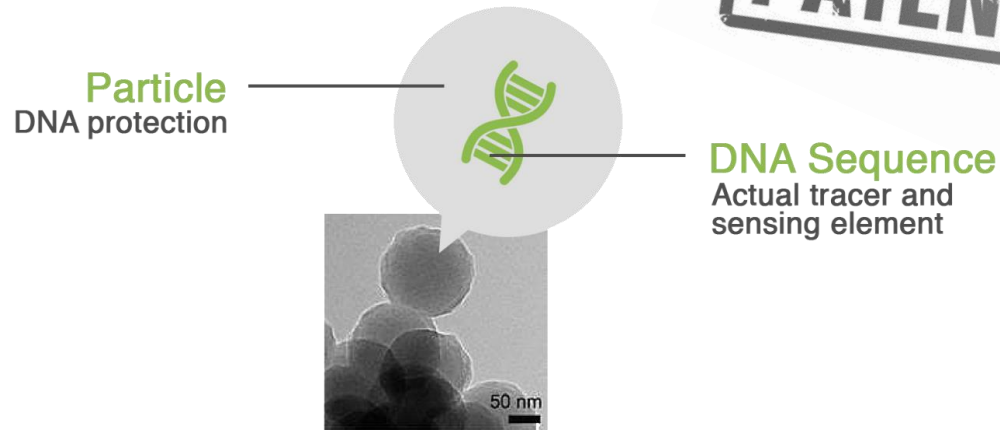
Could *you* tell which?

Cotton Paternity Test



We can, ensuring transparency and sustainability throughout the cotton supply chain!

Haelixa technology: encapsulated DNA-tracers



> 15 publications in outstanding journals including:

R. N. Grass, H. Reinhard, M. Puddu, D. Paunescu, W. J. Stark, **Angew. Chem. Int. Ed.**, 54, 2015.

D. Paunescu, C. Mora, M. Puddu, F. Krumeich, R. N. Grass, **J. Mater. Chem. B**, 2, 2014.

M. Puddu, D. Paunescu, W. J. Stark, R. N. Grass, **ACS Nano**, 8(3), 2014.

D. Paunescu, M. Puddu, J.O.B. Soellner, P.R. Stoessel, R.N. Grass, **Nat. Protoc.**, 8, 2013.

Scanning electron micrograph (SEM) showing several parallel, cylindrical filaments of Haelixa. The filaments exhibit a highly textured surface with numerous small, granular particles and a distinct longitudinal striation or ribbed pattern. The filaments are arranged in a slightly overlapping, parallel fashion, creating a sense of depth and texture. The background is dark, highlighting the intricate details of the filaments.

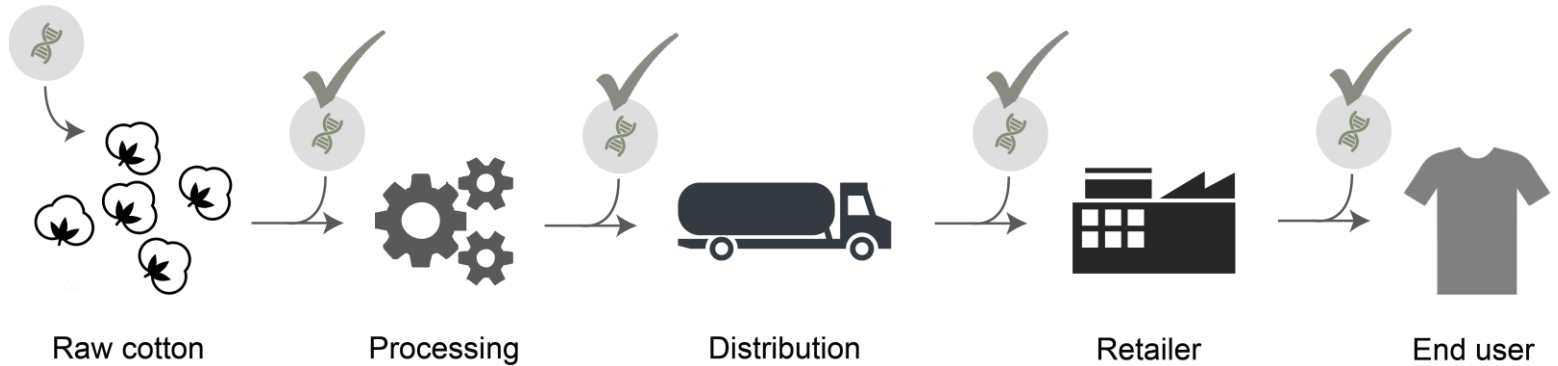
Haelixa

4 μ m

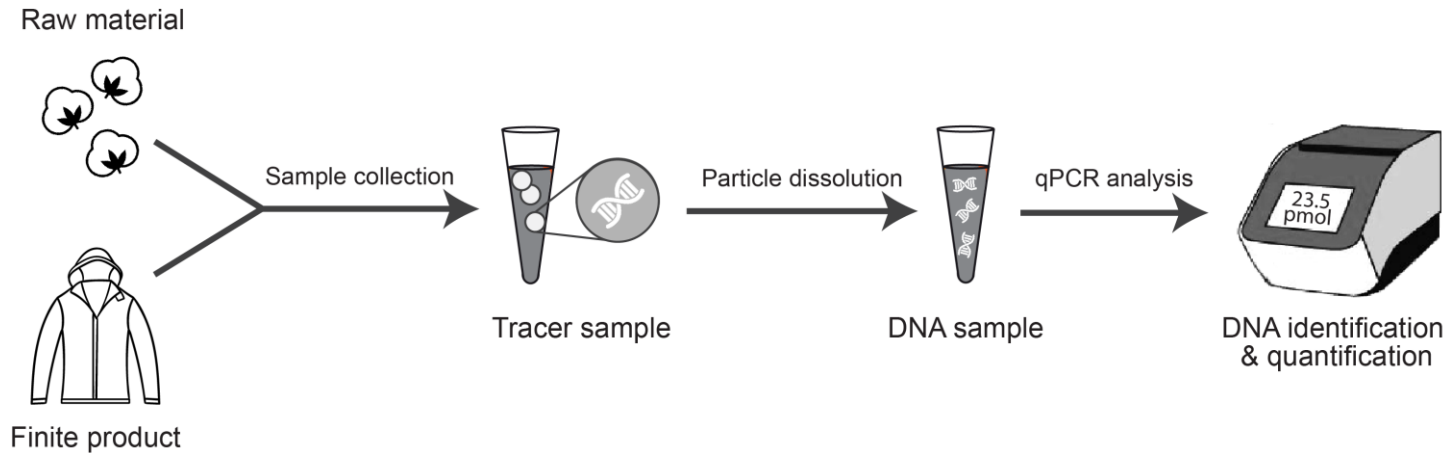


Traceability step by step

- Determining product authenticity
- Determining product origin
- Monitoring processing and distribution



How it is analyzed



Haelixa benefits



Versatile

Unlimited number of distinct fingerprints



Safe

Non-toxic and environment-friendly



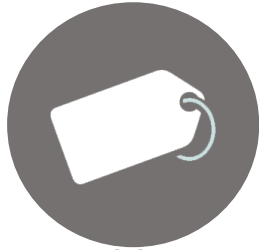
Cost-effective

<1% of product value

Tracing every step



Added value



Brand development

Ensuring product **safety** and **quality**
Deliver product with target client's **sustainability expectations**



Corporate Social Responsibility

Contributing towards more **sustainable** value chains



Controlled supply chain

Monitoring **origin** and **processing** of all components
Detecting irregularities, assigning liability

Case studies/tech validation



Polymers

(D. Paunescu et al., *Angew. Chem. Int. Ed.*, 52, 2013)



Fuel & oil products

(M. Puddu et al., *ACS Nano*, 8, 2014)



Food

(M. Bloch et al., *J. Agric. Food Chem.*, 2014)

Proven technology: applied to trace gemstones



Paternity test report:

Origin: Bogotá, Colombia

Mine: XYZ

Batch number: 348977

Batch date: 06.05.2017

thankx!

ETH Foundation
Zürich

— GEBERT RÜF STIFTUNG —



VENTURE
KICK

>>venture>>
TOP4
>>>ideas>>

>>venture>>
TOP2
>>>businessplan>>


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Finalist



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hello
tomorrow

