

Aquatic

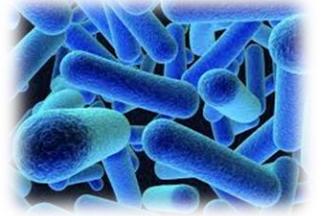
**Why is *Listeria monocytogenes* problematic
- and how to fight this bacteria?**

Nordisk Tilsynskonferanse

20.01.2026

Therese Faye

Listeria monocytogenes



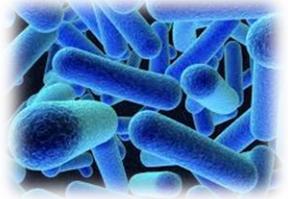
Gram-positive bacterium, saprophyte (breaks down organic matter)

Found "everywhere" in nature:

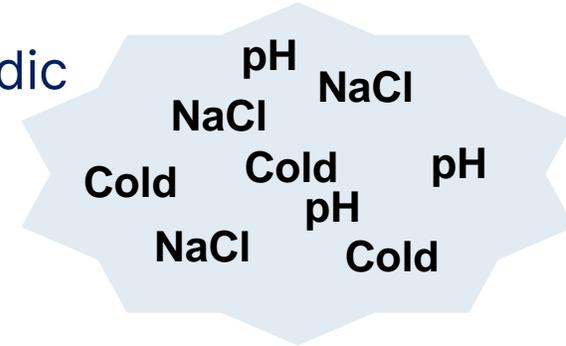
- All types of humid environments
- Soil, plant debris, dust, etc.
- The gastrointestinal tract of birds, animals and humans
- Production environment in the food industry



Listeria monocytogenes -important characteristics

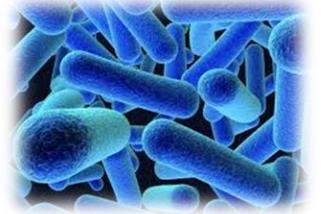


- Highly adaptable and robust; grows at low temperatures, tolerates acidic environments (pH 4.0) and high salt concentration
- Cannot withstand normal heat treatment (killed by pasteurization, boiling and frying)
- Ready-to-eat food is considered the most important source of infection
 - E.g. smoked and cured salmon, sushi, minced fish products
 - Unintentional ready-to-eat products
- Often transmitted via process areas/process equipment → biofilm
- Causes serious/fatal illness for vulnerable groups of consumers (listeriosis)



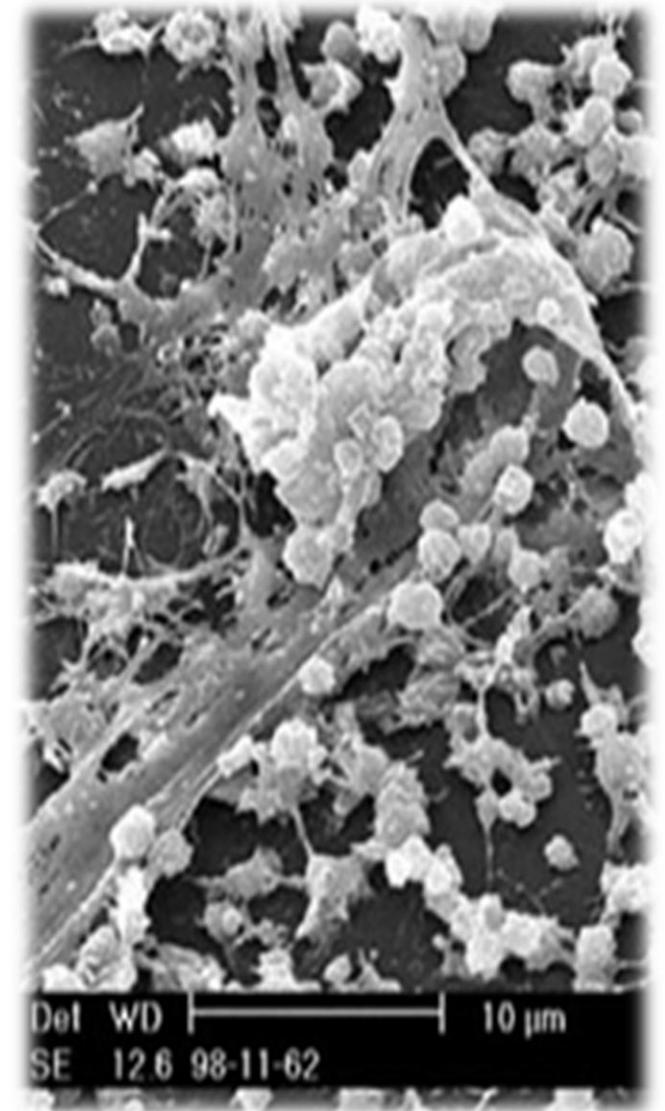
Listeriosis

- Healthy people (well-functioning immune system):
 - Febrile gastritis; fever, nausea, diarrhea
 - Flu-like symptoms
- People in risk group:
 - Septicaemia
 - Meningitis
 - Encephalitis
- Can lead to miscarriage/stillbirth
- Serious illness in newborns
- High mortality: more than 15 % of those who become ill

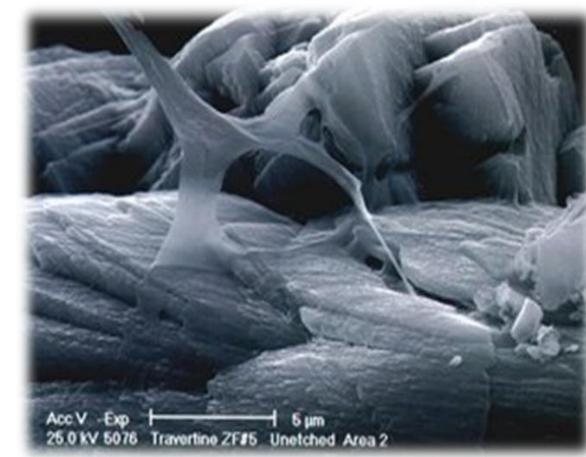
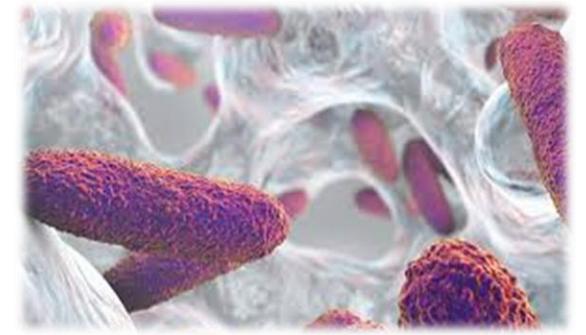
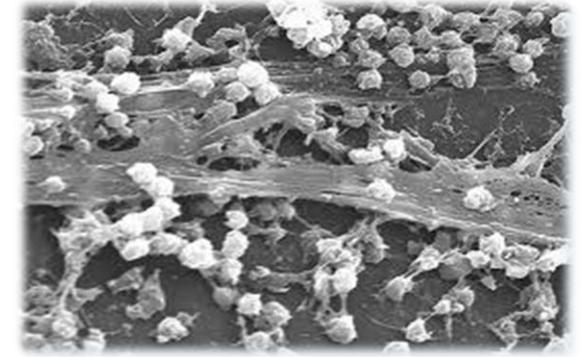
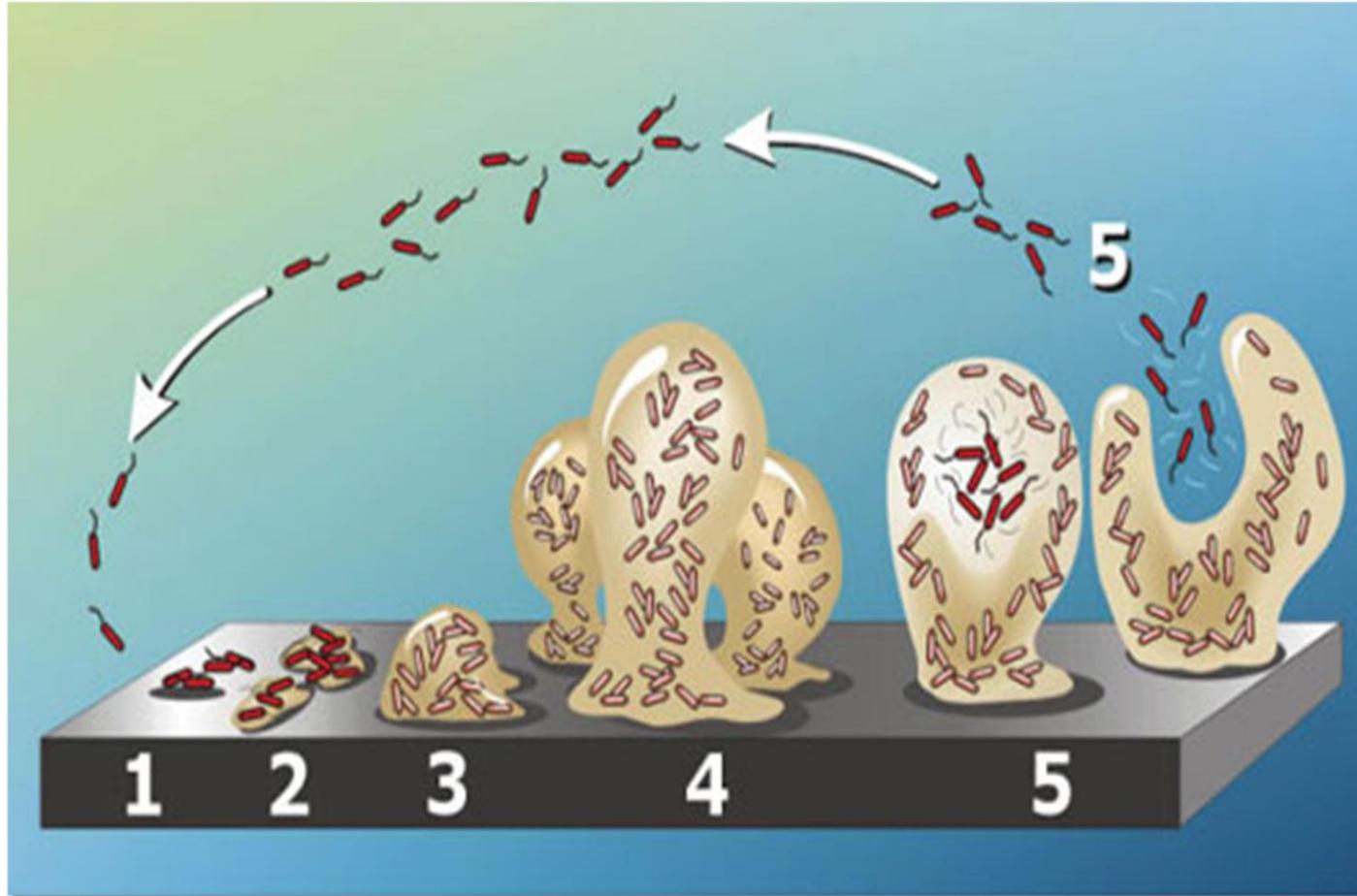


Formation of biofilms

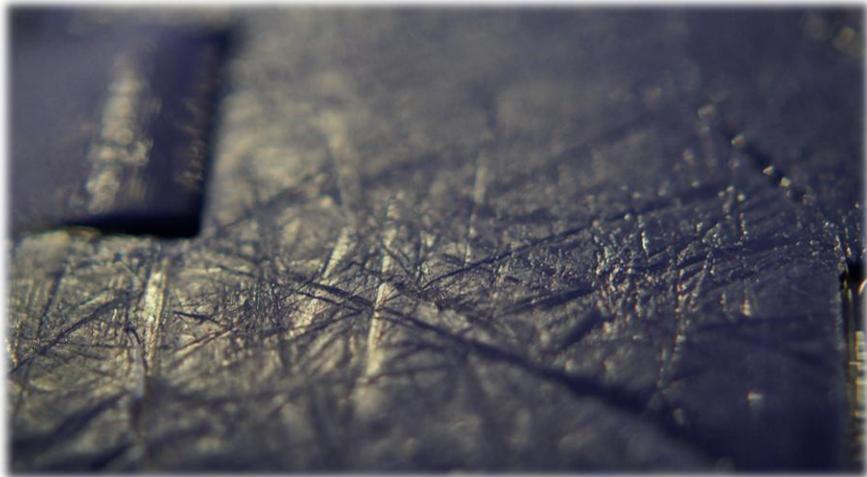
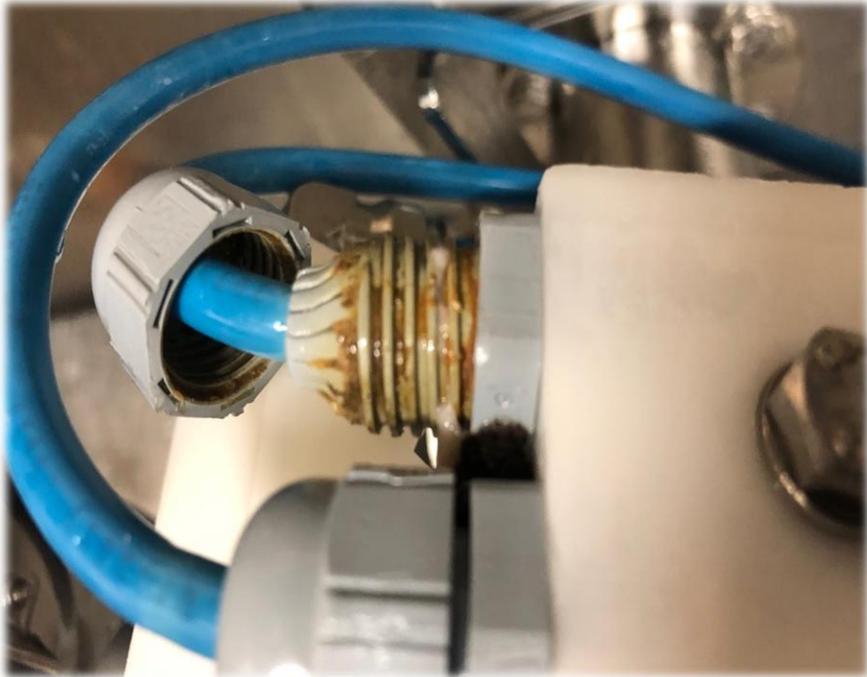
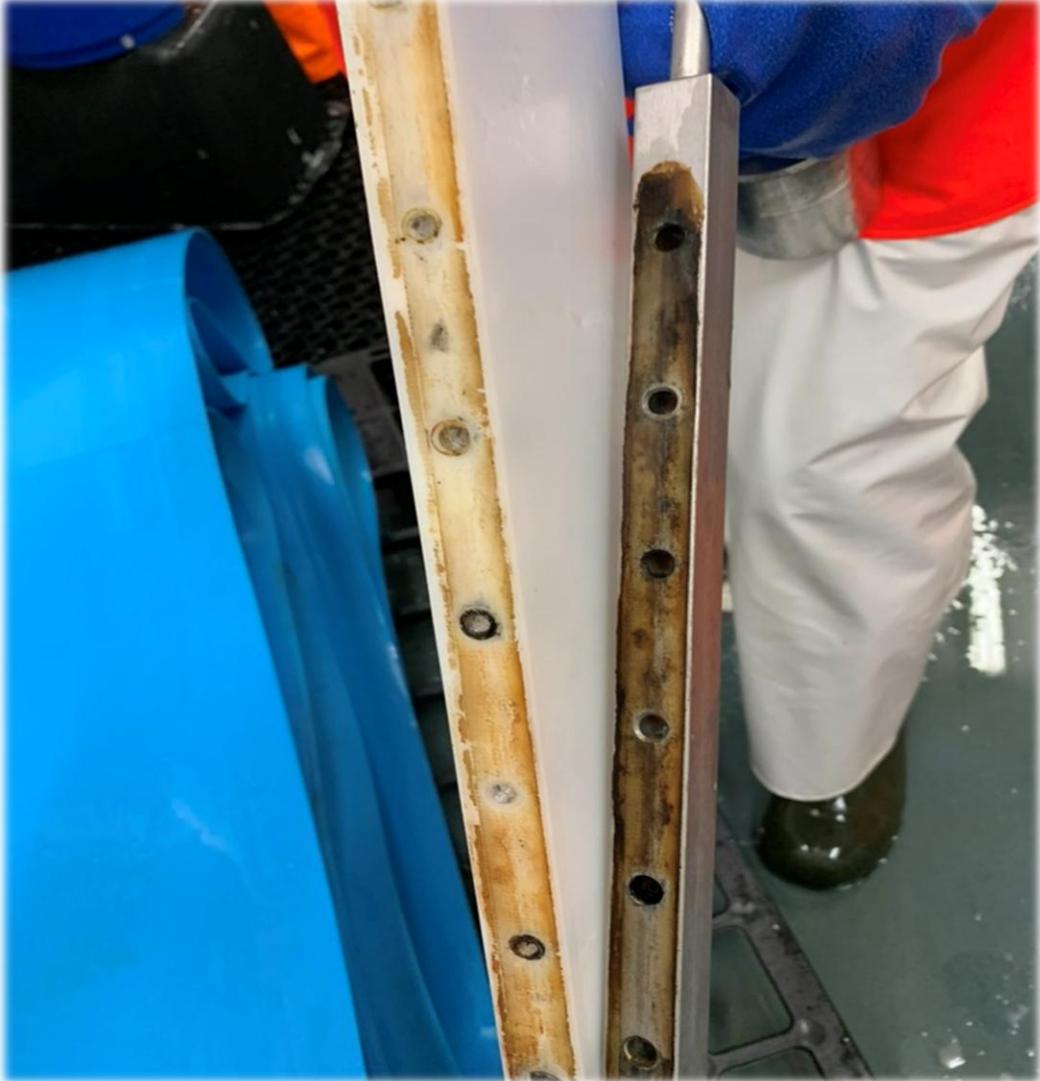
- Mucus layer consisting of microorganisms (including pathogenic bacteria) together with carbohydrates, fats and proteins
- Forms particularly quickly on moist surfaces
- Often found in cold production areas:
 - Steel structures
 - Plastic structures
 - Cracks and wounds in materials
 - Places that are difficult to clean
- Good hygienic design is extremely important
- Difficult to remove once established (house-strain)



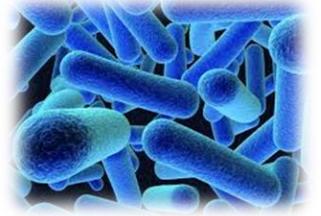
Formation of biofilms



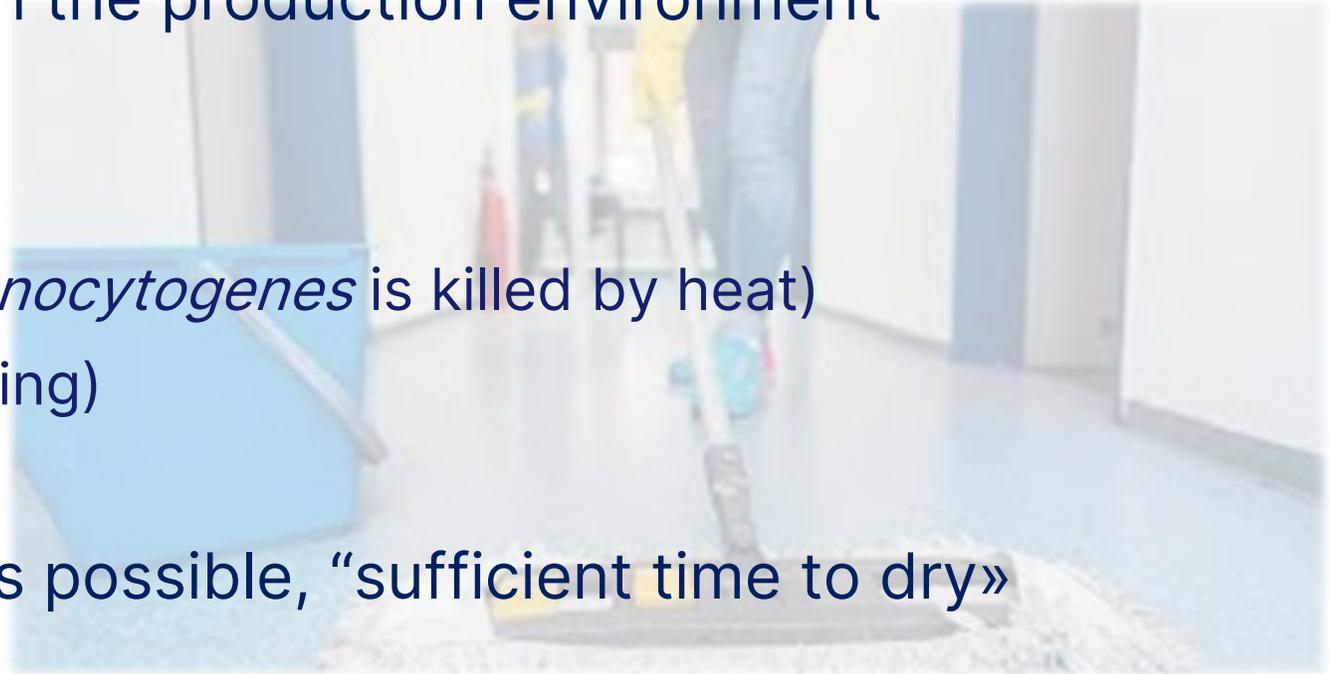
Formation of biofilms



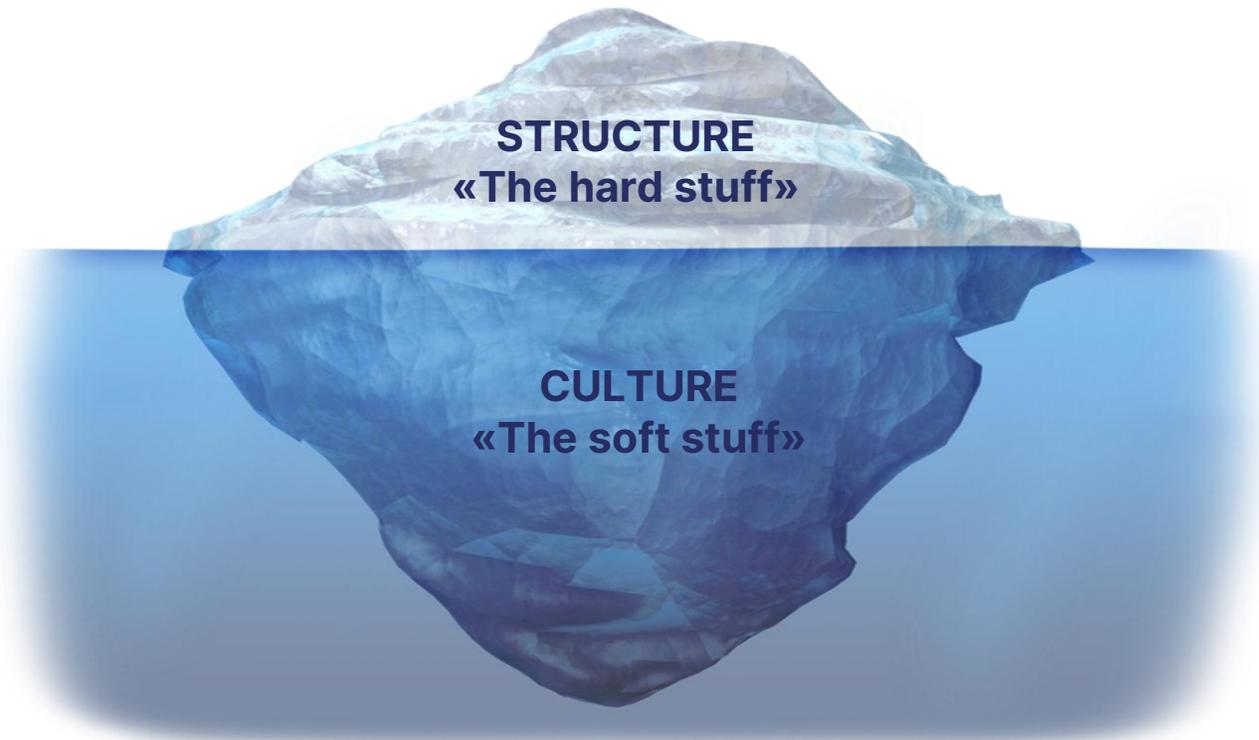
Cleaning and hygiene



- It is important to have good strategies to prevent the establishment of *Listeria monocytogenes* in the production environment
- “Cleaning rules”:
 - Time
 - Temperature (*Listeria monocytogenes* is killed by heat)
 - Mechanical force (scrubbing)
 - Chemistry
- Remove as much water as possible, “sufficient time to dry»
- «Food safety capacity» —————> «Food safety culture»



Food safety culture



Food Safety = Behavior



Contact me!

**Ta gjerne
kontakt!**

Therese Faye

Mikrobiolog & Trygg Mat spesialist, PhD
therese.faye@aquatiq.com

+47 934 31 796