



Aquatic<sup>®</sup>

What it Takes

# Biosikkerhet i praksis

Erfaringer og tips.

Complete  
Food Safety  
solutions

# Aquatic®

Aquatic®  
CONSULT

*Et ledende  
konsulentselskap  
innen Trygg Mat*

Aquatic®  
HYGIENE SYSTEMS

*Profesjonelle  
renholds- og desinfeksjons  
systemer*

Aquatic®  
FOOD FACTORY

*Komplette prosess-  
og CIP systemer for  
Trygg Mat produksjon*

Aquatic®  
CHEMISTRY

*Spesialisert kjemi  
for næringsmiddel- og  
mekanisk industri*

Aquatic®  
SENSE

*Pathogen  
Management, RAS &  
software for monitoring  
analytical results in the  
food industry.*

# Aquatic et globalt selskap:



## Aquatic

- *HQ Lillehammer*
- *Ca. 170 ansatte*

# Agenda:

- Trusler mot biosikkerhet!
- utfordringer i dagens anlegg!
- Hvordan kan vi forbedre dagens anlegg?

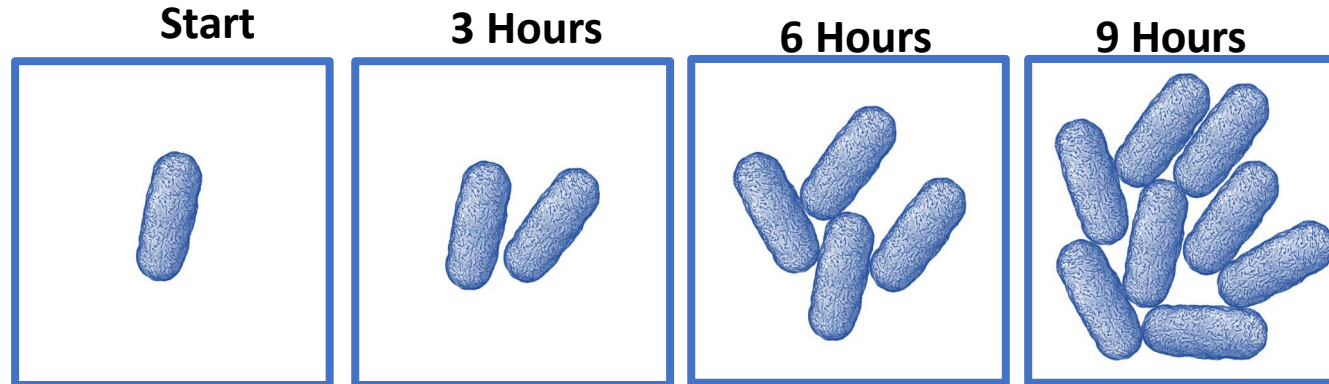


# Bakterier

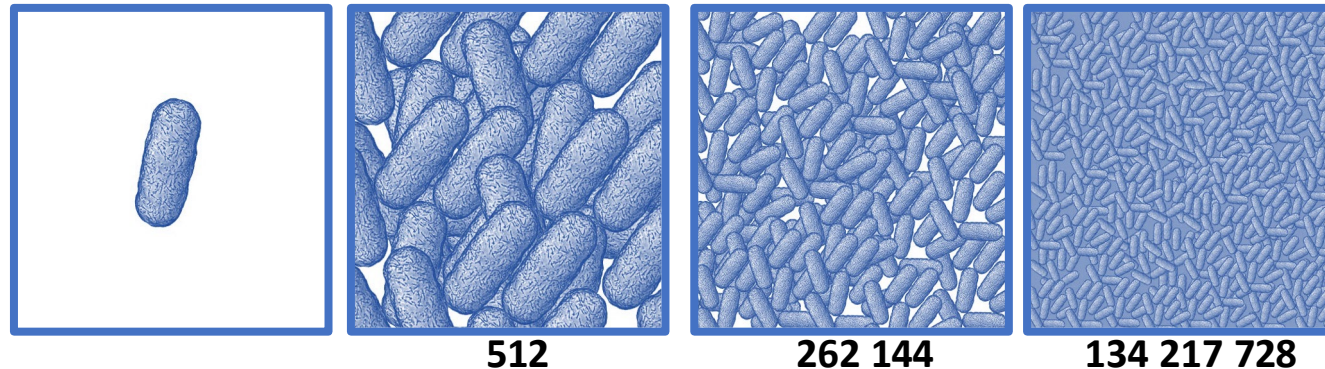
Bakterier formerer seg ved todeling

Tiden det tar å dele seg kalles generasjonstiden

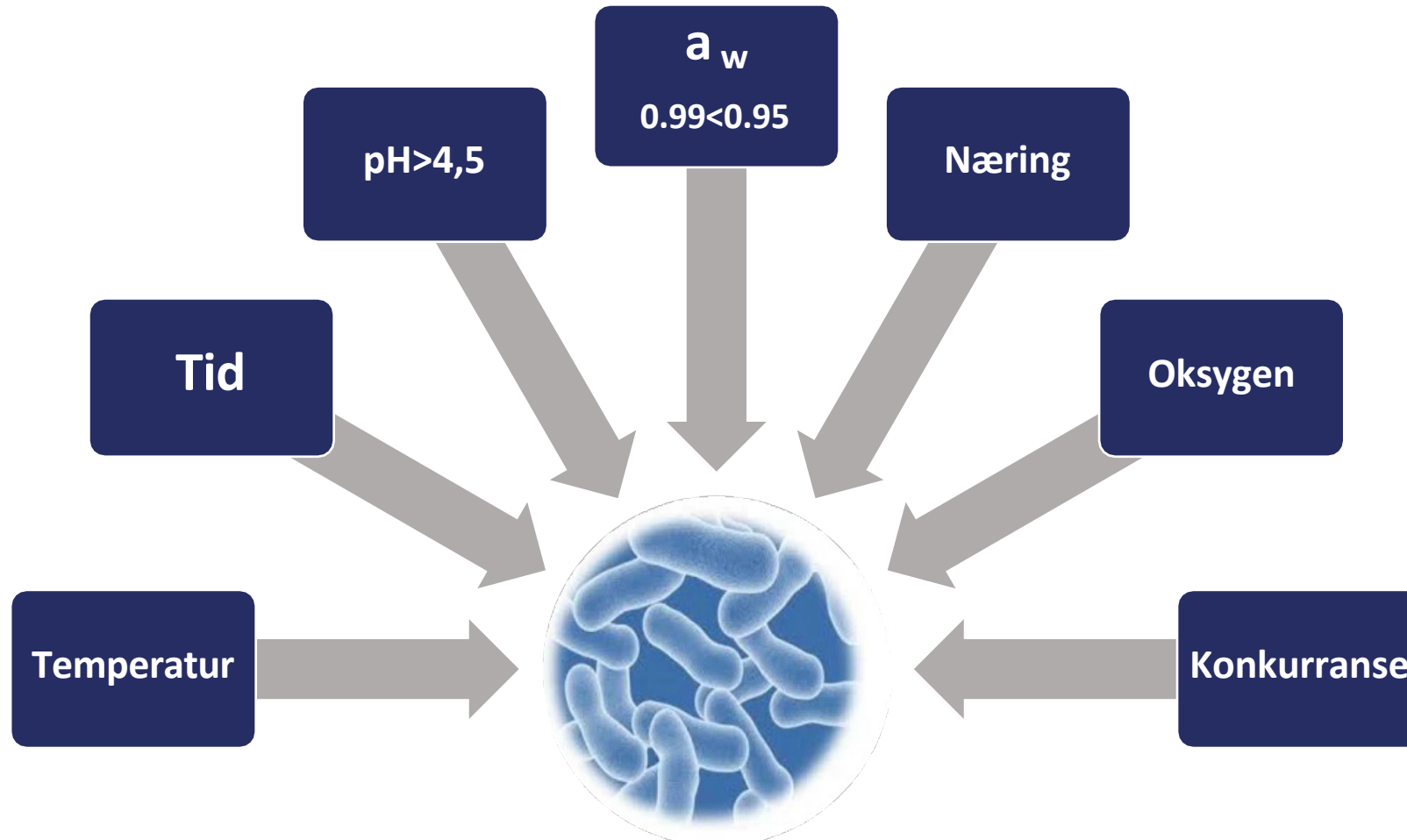
4° C  
Generational  
time  
3 hours



25° C  
Generational  
time  
20 minutes

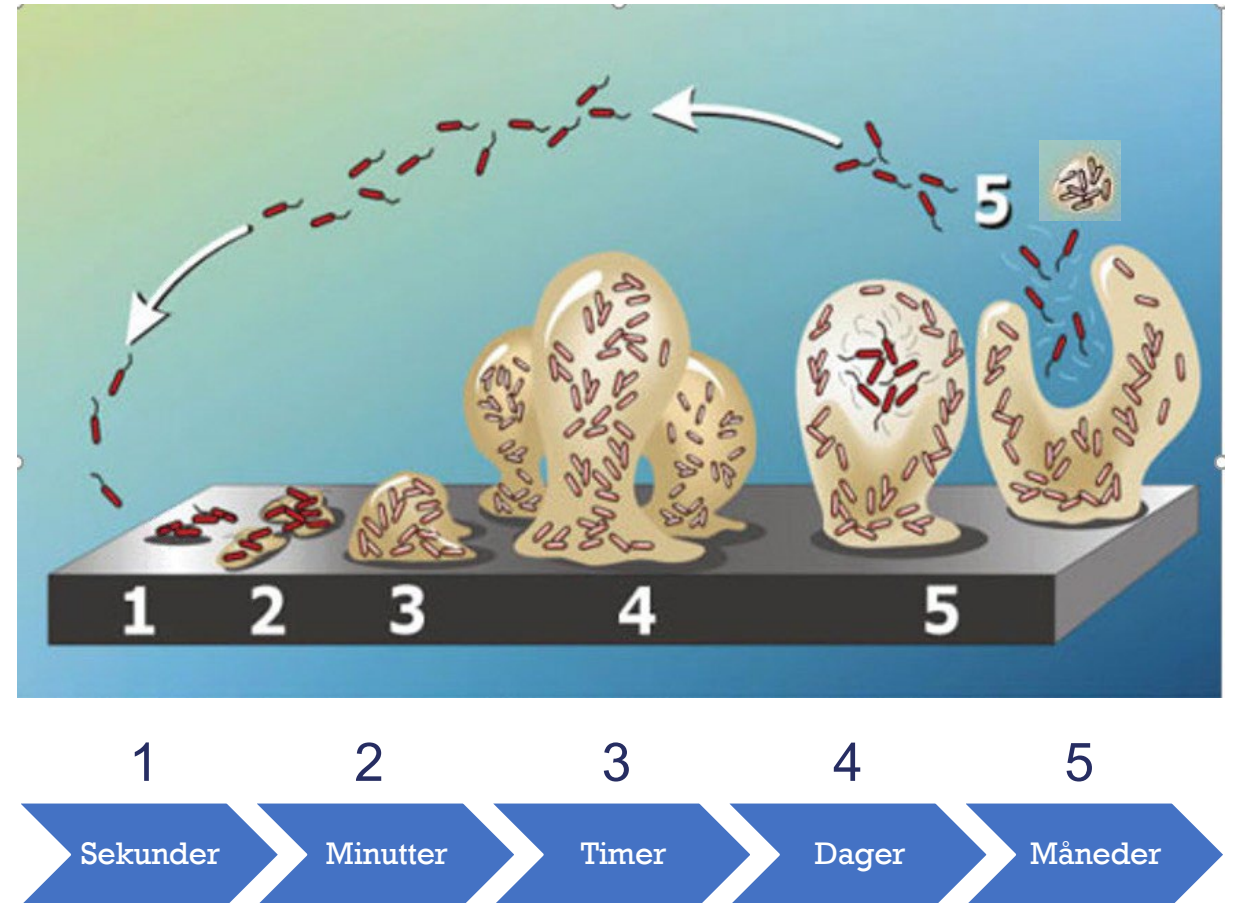


# Vekstvilkår bakterier.



# Biofilm

- Biofilmen blir en buffer mot endring i næringstilgangen
- Større resistens mot ytre påvirkninger som:
  - Antimikrobielle stoffer
  - Skjærspenning (spyling, mekanisk)
  - Uttørking
  - UV-lys
  - pH-endringer



# Redusert tilkomst





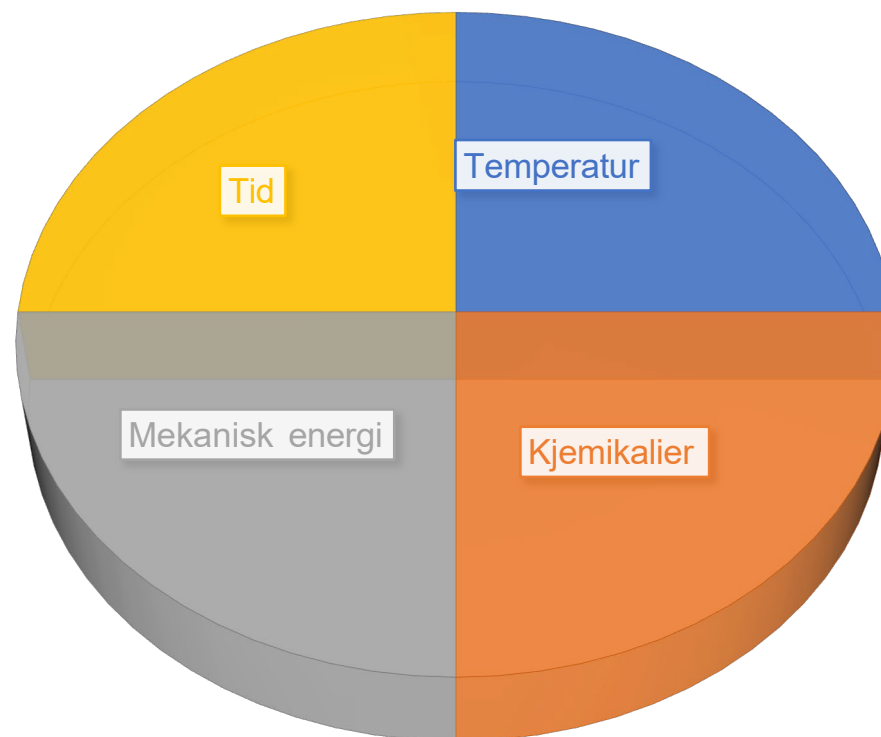
# Renholdsmetodik

- Manglende kunnskap og fokus.
- Feil dimensjonering av renholdsutsyr.

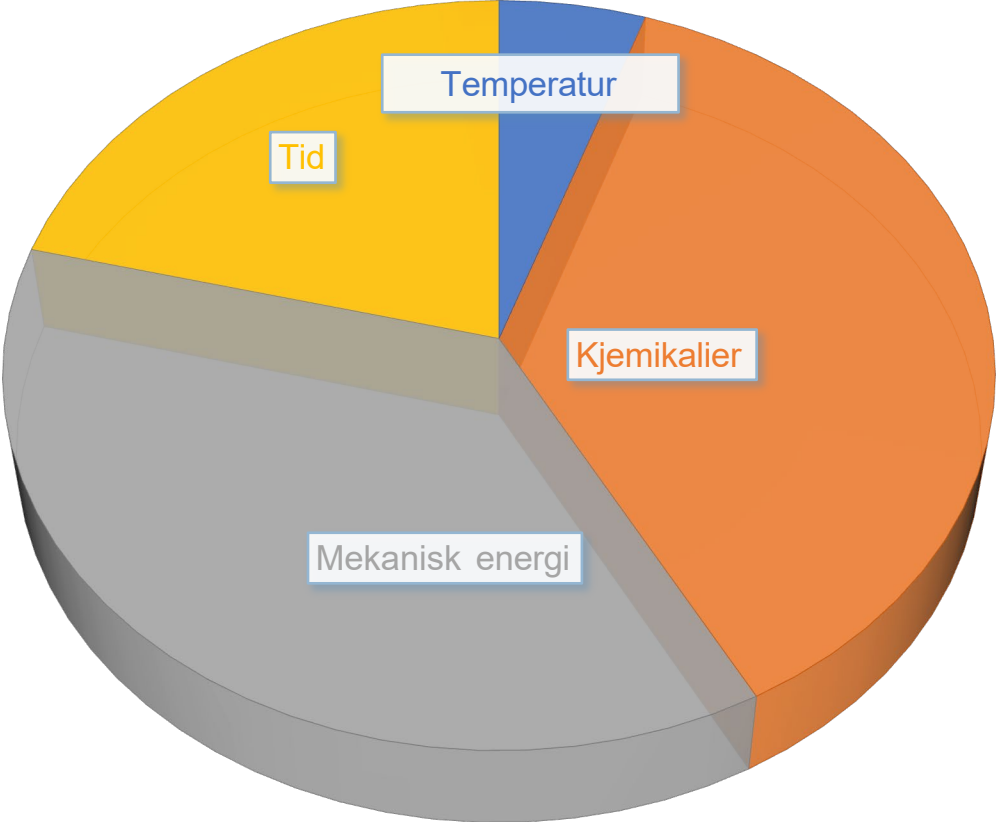


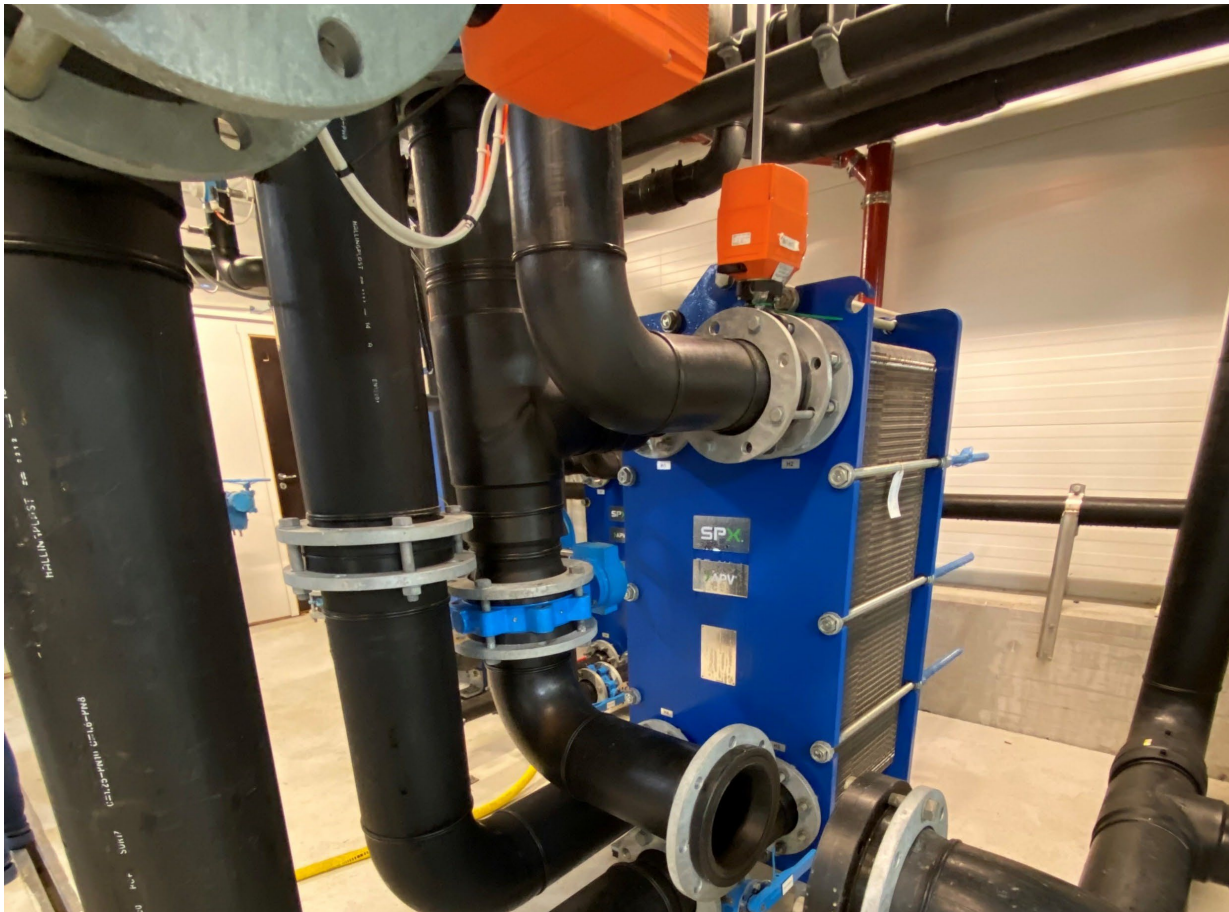
# Problemløsning

## ZINNERSKE SIRKEL TEORETISK



# Problemløsning





## Innvendige overflatter

Krypdyse/muldvarp

CIP (Clean in Place)



## Utvendige overflater

Manuell vask

Alkalisk Skum & Desinfekjon

# Materialvalg

- Lett vaskbare materialer
  - 316L /304
  - *Ra-Verdi* <0.8
  - Poretette og kjemibestandige materialer.
- Råbetong **MÅ** overflatebehandles!



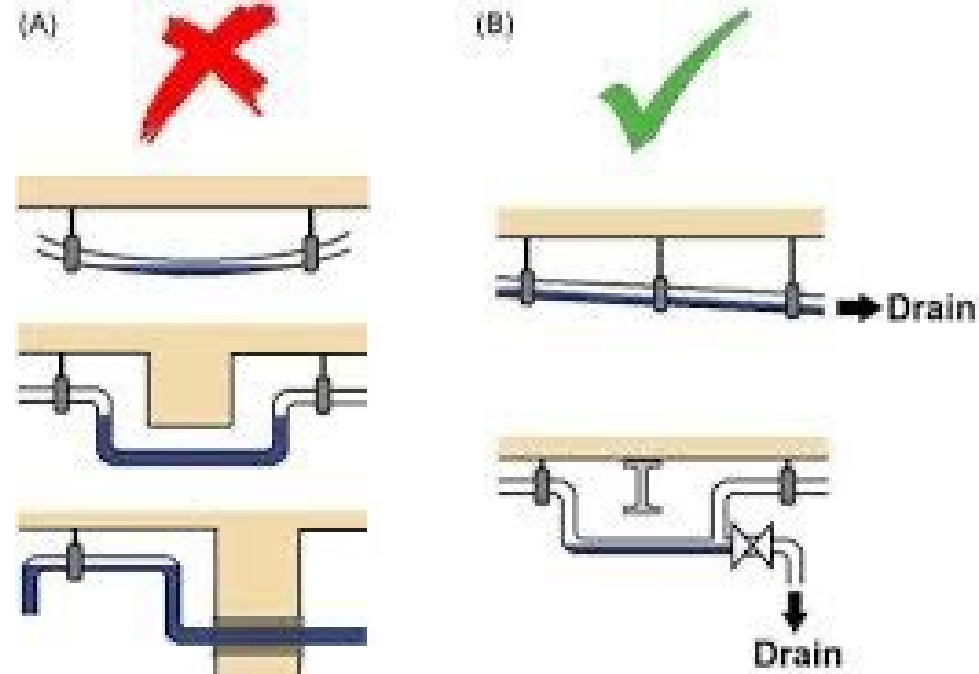
# Tilkomst/tilgjengelighet

- Unngå dødsoner eller områder som ikke kan vaskes manuelt.
- Økt tilkomst = mer vaskbart
  - Mer kontroll
- Enkel demontering og montering.



# Drenering

- Drenering/tørrlegging er en ekstra sikkerhet.
- Tomme rør kan vaskes lettere!
- Fjerner H<sub>2</sub>S-fare.





# Konklusjon

- Ved design av nye anlegg.
  - Tilkomst
  - Drenering
  - Materialvalg
- Seksjoner rørsystemene
  - Mindre vann og kjemi
- Ha gode rutiner på renhold

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## CLEANING PLAN

Department: Gutting & Paking    Plan number.:001    Audit date: 05.06.19    Responsible.: Shaun Robertson

OBJECT TO BE CLEANED	METHOD	CLEANING			DISINFECTION			MARKS
		CLEANING PRODUCT/ DILUTION	FREQUENCY	TIME	DISINFECTION/ DILUTION	FREQUENCY	TIME	
Processing Machines in the department, directly or indirectly in contact with the product, conveyors and ice dozer	Foaming & Scrub	Aqua Foam Alkalklor 4-6%	Daily	15-20 minutes	Aqua San QAT 3%	Daily	15 minutes	Rinse off sanitizer Use Aqua Biocip on trouble areas to remove biofilms – follow disassembly plans.  No scrubbing – rinse off with cold water
	Biofilm remover	Aqua Biocip 10-30%	Scrubbing plan	10-15 minutes				
	Descaler	Aqua Foam PH 10%	Monthly	45 50 minutes				
Floors, drains and 200 cm up the walls	Foaming & Scrub	Aqua Foam Alkalklor 4-6%	Daily	15-20 minutes	Aqua San QAT 3%	Daily	15 minutes	Rinse off sanitizer  No scrubbing – rinse off with cold water
		Aqua Foam PH	Monthly	45-50 minutes				
Ceilings from 200 cm above floors	Foaming & Scrub	Aqua Foam Alkalklor 4-6%	Weekly/if dirty	15-20 minutes	Aqua San QAT 3%	Daily	15 minutes	Rinse off sanitizer Focus on ceilings where there could be condense dripping down in process
Dismantled parts	Scrubbing	Aqua Biocip 10-30%	Disassembly plan	10-30 minutes	Aqua San QAT 3%	When assembled	15 Minutes	Rinse off sanitizer Follow SOP for dismantled parts
Production side of transition area	Foaming & Scrub	Aqua Foam Alkalklor 4-6%	Weekly/if dirty	15-20 minutes	Aqua San QAT 3%	Daily	15 minutes	Rinse off sanitizer
Boot Cleaners	Foaming & Scrub	Aqua Foam Alkalklor 4-6%	Weekly/if dirty	15-20 minutes	Aqua San QAT 3%	Daily	15 minutes	Brushes must be disassembled before cleaning machines and brushes
Small parts	Manually scrubbing	Aqua foam Alka SMS 1-3%	When needed		Aqua San QAT 3%	After Cleaning	15 Minutes	Rinse of sanitizer

Progress:    Tidy up – Gross debris – Pre-rinse – Foaming / Apply chemicals – Scrub / Power-rinse – Drain standing water – Disinfection – Rinse off – Dry up & tidy up

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NB! USE RECOMMENDED PPE: 

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## SENSE



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