EFFICACY OF SUB-PASTEURIZATION THERMALIZATION TO REDUCE FOODBORNE PATHOGENS IN RAW FLUID MILK

Food Science and Technology

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Why do we need to validate sub-pasteurization temperatures in regards to food safety

The FDA 60-day rule for “raw-milk” cheese

Recent reports from FDA have indicated their lack of confidence in the 60-day aging rule

01

FDA may be increasing their scrutiny of dairy products produced with non-pasteurized milk

02

Goal: We need to validate processes in sub-pasteurized cheese that can effectively reduce foodborne pathogens

Food Safety Validation – Building a process that is specific to the threat

- Verification: Did we build the system right?
- **Validation**: Did we build the right system?

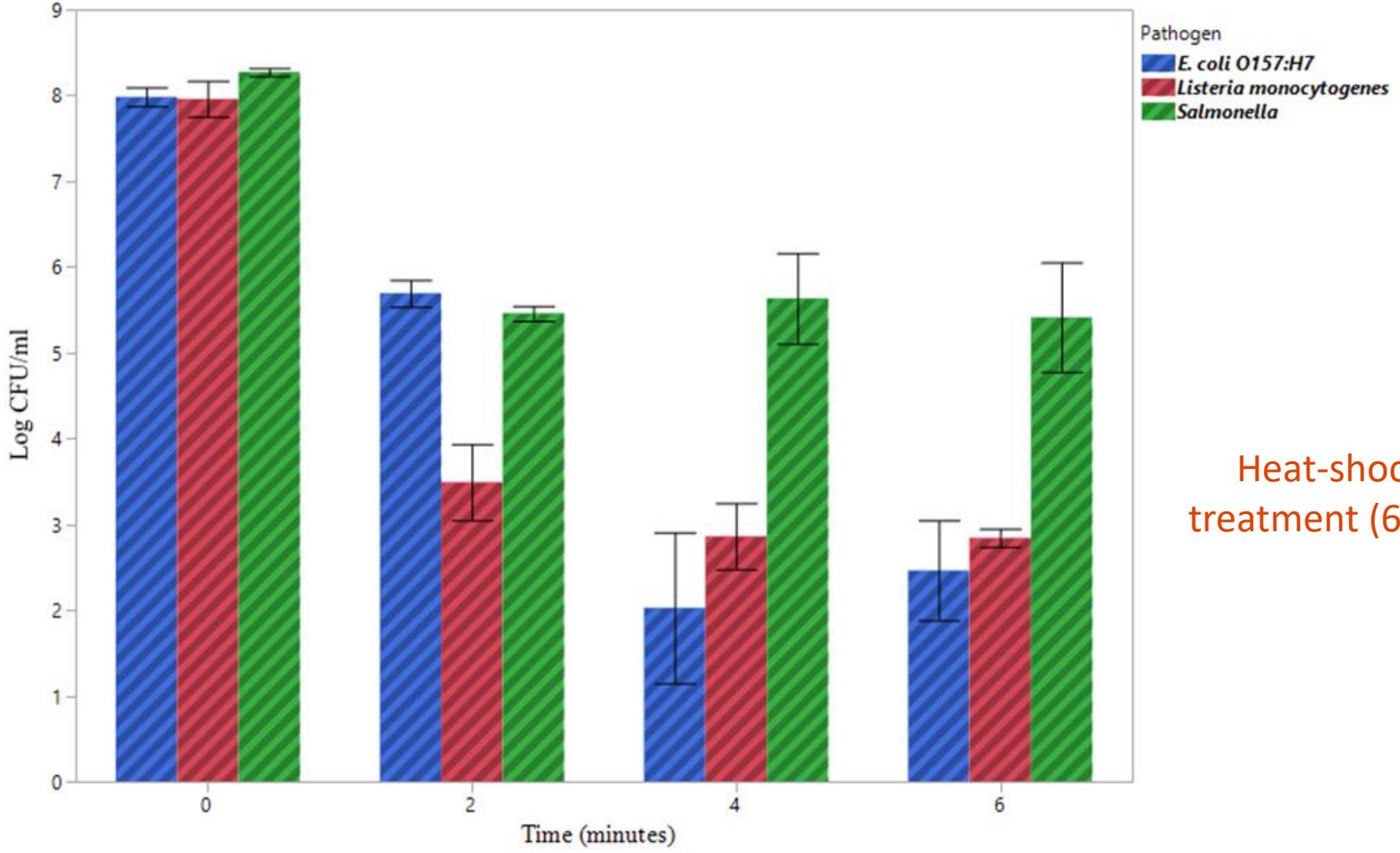
To validate heat-shock treatment against foodborne pathogens, we need to find the pathogen of highest concern

E. coli O157:H7

Salmonella

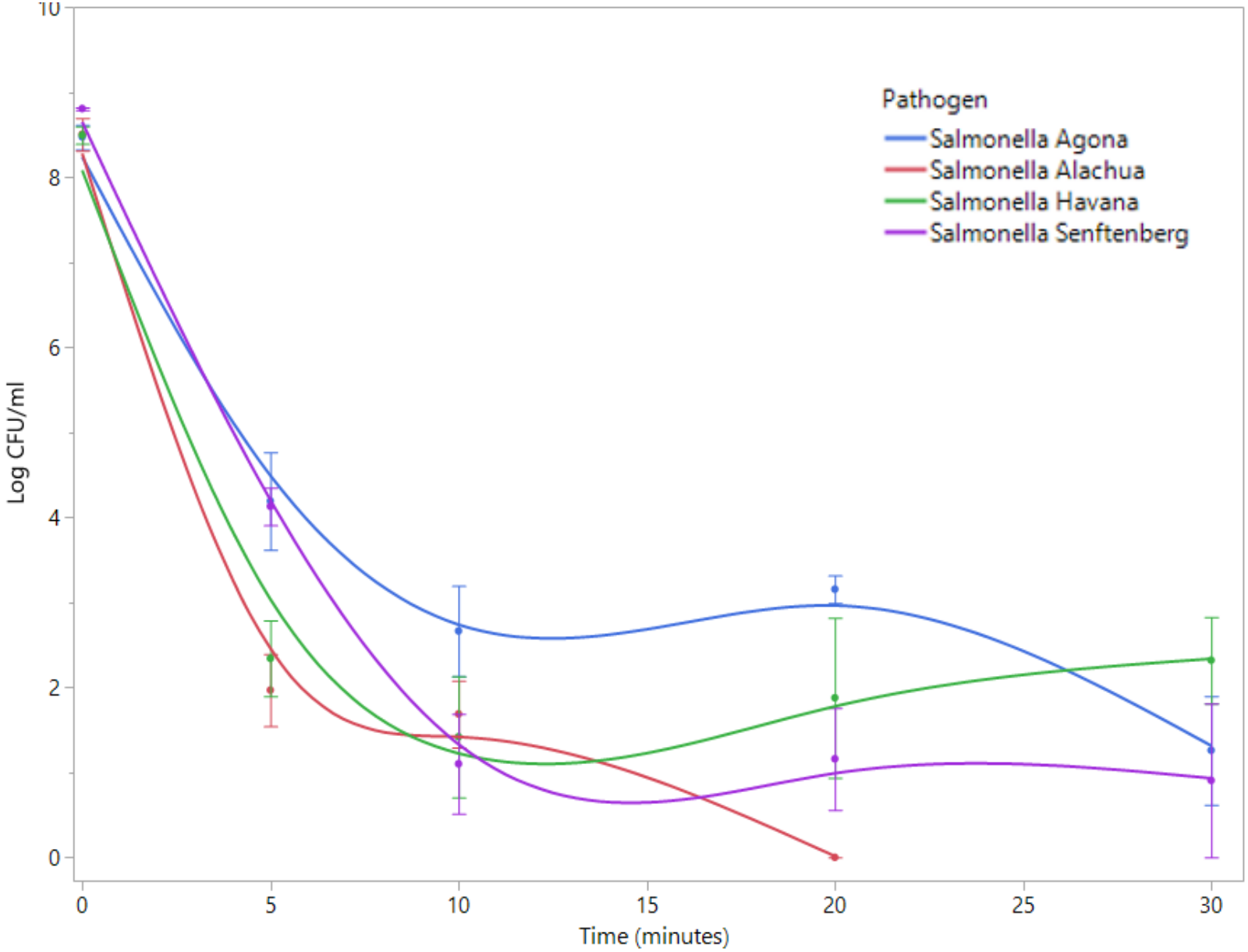
Listeria monocytogenes

Salmonella is the most thermotolerant fluid milk associated pathogen



Heat-shock treatment (63°C)

Reduction between different dairy associated *Salmonella* strains is also significant



Next steps

- Validate “heat-shock” treatments against *Salmonella* in raw fluid milk at pilot-scale (using adjustable HTST unit)
- Validate other possible processing steps in cheese production to target foodborne pathogens (i.e. **salting and fermentation**)

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Any Questions?