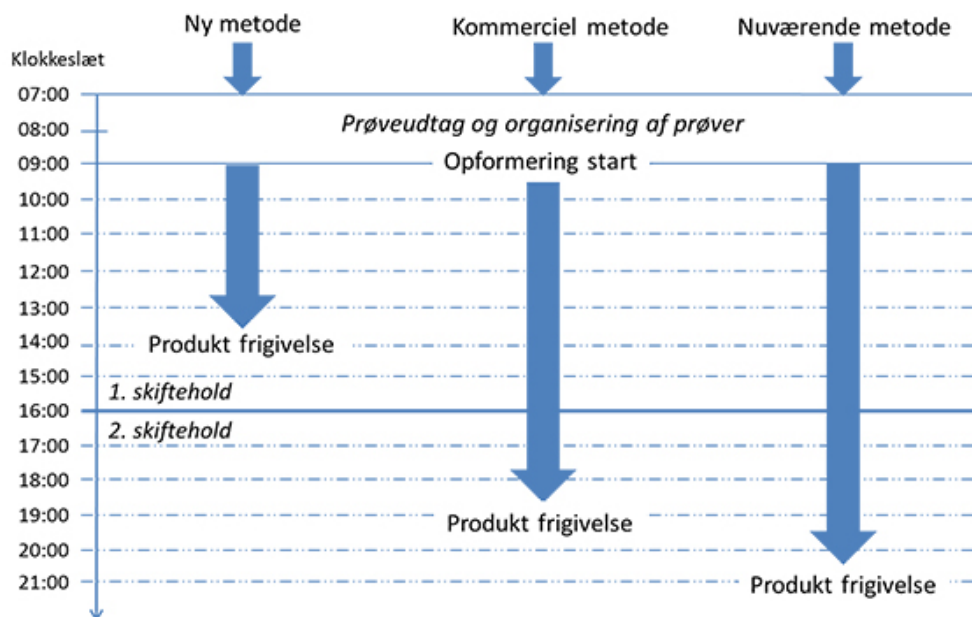


Detecting salmonella in pork meat twice as fast

March 21 2017



Credit: Technical University of Denmark (DTU)

A new method developed at the National Food Institute, Technical University of Denmark, halves the time it takes slaughterhouses to test for disease-causing salmonella in pork meat. The test can save the slaughterhouses money i.e. by ensuring meat reaches the market faster, which in turn reduces the costs of operating the meat chillers.

Salmonella bacteria are responsible for a large part of the foodborne

infections in Denmark. For several years pork [meat](#) has been the food source most commonly implicated with [salmonella infections](#) acquired in Denmark. In order to prevent salmonella infected meat from reaching consumers, slaughterhouses test meat before it leaves the slaughterhouse.

With current testing methods it takes at least 10 hours to get test results. A new method developed at the National Food Institute can be completed in less than five hours. This enables testing to be carried out within one working shift and the meat can be sent to market faster, which in turn reduces the slaughterhouses' operating costs for meat chillers and extends the shelf life of the meat in the distribution chain.

Optimized sample preparation and analysis

The workflow of the new test method – which is being patented – is in many ways similar to the current workflow at the slaughterhouses, making implementation easier. The time saving is mostly due to the optimization of the sample preparation process, but also the way samples are analyzed has been optimized to enable disease-causing bacteria to be detected more quickly.

Validation testing carried out at the National Food Institute shows that the new method is as effective as existing methods at detecting [salmonella](#) in pork meat. The [method](#) has therefore been submitted for validation according to the relevant ISO standard so that it can be implemented by slaughterhouses around the world.

More information: M. S. R. Fachmann et al. Detection of Salmonella enterica in Meat in Less than 5 Hours by a Low-Cost and Noncomplex Sample Preparation Method, *Applied and Environmental Microbiology* (2017). [DOI: 10.1128/AEM.03151-16](https://doi.org/10.1128/AEM.03151-16)

Provided by Technical University of Denmark

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