

# Rockefeller microbiologist tests safety of spiked eggnog

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(PhysOrg.com) -- With one in every 20,000 eggs contaminated with Salmonella bacteria, drinking homemade eggnog can be something of a gamble. But an experiment designed to test whether the alcohol in spiked eggnog can kill the deadly bugs suggests that, in general, few bacteria survive in a mixture containing both raw eggs and 20 percent rum and bourbon.

The experiment, which was done by Rockefeller University professor Vincent A. Fischetti at the request of National Public Radio's Science Friday program, compared the bacteria found in homemade alcoholic eggnog with those found in store-bought nonalcoholic nog. After culturing samples of both solutions and incubating them for 24 hours at 37 degrees Celsius — body temperature — Fischetti and his colleagues found that while the store-bought product was teeming with a range of bacteria, the homemade version was completely sterile.

“The bacteria we observed in the grocery-store product are likely harmless normal bacteria that are found in all dairy products,” says Fischetti, who is head of the Laboratory of Bacterial Pathogenesis and Immunology. “In fact, they were probably in the cream and other products we used when we made our eggnog but were killed by the alcohol.”

When the scientists performed the same experiment but added a heavy dose of Salmonella bacteria, the results were inconclusive. “In our 24-hour time frame, the alcohol in the eggnog did not kill all the

bacteria, but we used 1,000 times more Salmonella than what you might encounter in a contaminated egg,” Fischetti says.

“In order to authoritatively say that spiked eggnog is either safe or unsafe, we’d have to repeat the experiment under a range of more realistic conditions,” he says. “We’d probably need a grant.”

Provided by Rockefeller University

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