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From: Meredith Brown <racer@lanl.gov>
Subject: Yellow Alert: Small Bench Top Fire

Title: **Bench Top Fire Involving Use of Alcohol and Burner**

Identifier: LLNL-1998-009

Date: 1/12/98

Lesson Learned Statement: Work requiring the use of alcohol, or other flammable liquids, and open flames should be performed only when the appropriate safeguards and constraints are in place.

Discussion of Activities: A fire occurred in a laboratory facility that resulted from having an open flame too close to an open container of ethanol alcohol. The experimenter was using a small wire loop to transfer cells onto a culture dish and was using a combination of an alcohol dip and a Bunsen burner to clean the loop between actions. The ensuing fire involved about two feet of the workbench and was easily extinguished.

Ethanol fumes apparently moved toward the burner from an open container and ignited. The fire spread to paper on the bench top and melted the gas hose to the burner.

Recommended Actions: Keep open flames and ethanol, or other flammable liquids, separated as widely as possible. Use the smallest amount of ethanol required and keep it in a narrow mouthed container, preferably stoppered. Working in a fume hood helps keep fumes from accumulating in the area. Keep a cover for the container handy, in case the fumes flash over. Maintain good housekeeping. In this case, the work area was cluttered with squeeze bottles, test tubes, and paper, all of which added fuel to the fire.

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Priority Descriptor: Yellow/Caution

Keywords: Flammable liquids, open flames

References: LLNL Lessons Learned, "Open Flames and Alcohol--A Dangerous Combination," January 12, 1998

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