Assessment of Gaseous and Particulate Propellant Residues Resulting from Small Arms Live Firing

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Introduction

The Canadian Forces (CF) use small arms to conduct training and operations. The CF needs to quantify the exposure of personnel to gaseous and particulate propellant residues during small arms live firing to reduce the health risks associated with small arms live firing.

Objective

- To assess the extent of the personal exposure to gaseous and particulate propellant residues during small arms live firing.
- To determine whether gaseous and particulate propellant residues present any health risks to CF personnel.

Method

- The exposure to the gaseous and particulate propellant residues during small arms live firing was monitored using personal monitoring devices.
- The particulate and gaseous propellant residues were collected using impingers and filters, respectively.
- The collected samples were analyzed using gas chromatography and mass spectrometry.

Results

- The concentration of gaseous and particulate propellant residues was found to be lower than the established limits.
- The exposure to the gaseous and particulate propellant residues was found to be within safe limits.

Conclusion (continued)

- The exposure to the gaseous and particulate propellant residues during small arms live firing was found to be within safe limits.
- The Canadian Forces can continue to conduct small arms live firing with confidence, knowing that the health risks associated with small arms live firing are minimal.

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