Just the Facts
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U.S. Army Environmental Hygiene Agency

Imported Night Vision Equipment Presents Radiation Hazards

Some night vision equipment imported from the former Soviet Union may pose two safety concerns: possible optical radiation from the illuminator and possible radiation from the viewer. The equipment may resemble binoculars, telescopes, or gunsights and is advertised in national magazines for sporting and recreational uses.

Items of concern consist of an infrared image intensifier used to view objects in subdued light and may include an infrared light source that illuminates an object. Products were submitted for testing to the Center for Devices and Radiological Health of the Food and Drug Administration. Some tested units used laser diodes with an 806-868 nm wavelength as illuminators.

Models NP-1 and NZT-4 produced by the Rostovski Optico-Mechanicheskij Zavod in Rostov, Russian Federation, and Model SM-4A "Cheetah" produced by Byelorusian Optical Mechanical Amalgamation, Minsk, Belarus, may contain suspect laser diodes.

Products suspected of containing laser diodes will be detained at the port of entry until their compliance status, with respect to the laser performance standard, is documented. Products that are certified have a certification label, a label with the manufacturer's name and address, and specific warning labels. Corrective action plans call for the laser diodes to be replaced with light-emitting diodes.

Viewers in these night vision devices were tested for x-ray emission. T3C units that have a plastic housing produced by the Novosibrisk Instrument Making Plant, Novosibrisk, Russian Federation, were found to emit low-energy x-rays (14.5 keV) at levels of up to 20 mR/hr. Exposure to such x-ray emissions could cause, or significantly contribute to, the development of cataracts of the eyes or skin cancer on the hands or face. Effects of exposure may take months or years to become evident. Manufacturers and/or importers of defective electronic products or those that fail to comply with the performance standard have the responsibility to provide a refund or to repair or replace products that have been sold.

- **Night Vision Equipment**
- **Laser Diodes**
- **Light-emitting Diodes**

Corrective action plans for the viewers have included shielding the imaging tube by wrapping it in metal foil or installing a factory-designed metal shield. Both methods have proven effective for reducing the level of emitted x-radiation.

For further information, contact Frank Mackison, Office of Compliance (HFZ-300), CDHR, FDA, 2098 Gaither Road, Rockville, MD 20850, Commercial 301-594-4654.

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