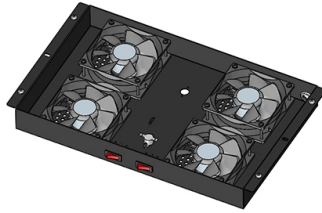


Principle of Liquid Nitrogen Spectrometer



Overview

Liquid nitrogen is used as a cooling agent in various spectroscopic techniques to improve sensitivity and resolution. Spectroscopy, the study of the interaction between matter and electromagnetic radiation, has evolved significantly since its inception in the 17th century. The warm laboratory dewar, funnel, and detector may cause the liquid nitrogen to boil rapidly and spatter. Always wear. Since HPGe detectors produce the highest resolution commonly available today, they are used to measure radiation in a variety of applications, including personnel and environmental monitoring for radioactive contamination, medical applications, radiometric assay, nuclear security, and nuclear plant. Liquid nitrogen (LN2) is nitrogen in a liquid state at low temperature. It has a boiling point of about $-196\text{ }^{\circ}\text{C}$ ($-321\text{ }^{\circ}\text{F}$; 77 K).



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Liquid nitrogen

Liquid nitrogen A demonstration of liquid nitrogen at the Freeside maker space in Atlanta, Georgia, during the Online News

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Liquid nitrogen

When filling a vacuum bottle or the dewar, pour slowly. Pouring too quickly can cause the bottle or dewar to expel

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High Purity Germanium Detectors

The immersion of the cold finger into the liquid nitrogen maintains the HPGe crystal at a constant low

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LS2 LIQUID NITROGEN SENSOR

2.1 Operating Principle The LS2 operates by detecting the different thermal conductivities of liquid and gaseous nitrogen. This is done

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Abstract This paper proposes spraying liquid nitrogen as an external thermal excitation for pulsed cool thermography

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Liquid Nitrogen

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Cooling a detector

If you have a liquid nitrogen-cooled MCT detector, you must cool it with liquid nitrogen before you can measure data.

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FTIR Spectrometers: Why Liquid Nitrogen-Cooled MCT Detectors Still

Liquid nitrogen cooling allows the MCT detector to operate at cryogenic temperatures, typically around 77 Kelvin (-196

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Using liquid nitrogen

Liquid nitrogen is extremely cold and therefore potentially hazardous. The warm laboratory dewar, funnel, and

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How do liquid nitrogen generators work? | Noblegen

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Liquid nitrogen

Because the liquid-to-gas expansion ratio of nitrogen is 1:694 at 20 °C (68 °F), a tremendous amount of force can be generated if

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