

Product Information

Carbon Nanotube Array

Catalog Numbers **687804** and **687812**

Store at Room Temperature

Technical Bulletin AL-237

Synonym: CNT Array

Product Description

Each Carbon Nanotube (CNT) Array is packaged in a Vacuum Release™ (VR) Tray. The VR Tray holds the array securely in place during shipping or handling, offering the ability to release the array on demand. The proprietary Vacuum Release process relies on changing the surface contact area between the array and the Gel membrane on the tray surface. In Retention Mode (see Figure 1), the surface contact is maximized and the array is held firmly in place. In Release Mode (see Figure 2), the surface contact is minimized by applying a vacuum to draw the Gel membrane away from the array. The array can then be easily removed in the vertical direction using a vacuum tool or tweezers.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Guidelines for using Vacuum Release Trays:

Holding Fixture – The VR Tray should be positioned on a vacuum plate designed to deliver vacuum to the underside of the tray. Stand-alone stations (Gel-Pak VRS-24 and VHP-24) are available. However, any convenient method of applying a house vacuum to the backside of the tray (through the hole in the back of the tray) should work well, with proper care.

Vacuum - Best removal results are obtained by applying a vacuum of 25" of Hg. The Gel membrane may appear to be in the Release Mode even under relatively low vacuum conditions, but a full vacuum is necessary for optimal release.

Pick-up Tools - The largest tweezers tool compatible with the array size should be used in order to deliver the maximum twist or rotation motion. The Gel holding strength is weakest in the peel direction, therefore, the array can be easily removed from the Gel by simply applying rotation.

Array contact/Removal - Contact force between the pick-up tool and the array should be minimized so the array is not pressed into the Gel membrane. Once the array is properly engaged by the pick-up tool, the rate of ascent should initially be slow. Rapid ascent may tend to separate the array from the tool.

Membrane Tear - Gel membranes are relatively fragile and should be handled with care. If a membrane tears, then vacuum leakage at the tray will occur, which can inhibit array removal.

Storage/Stability

Store the array at room temperature.

Vacuum Release is trademark of the Gel-Pak Corp.

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Figures 1 and 2.
VR Tray - Array Removal

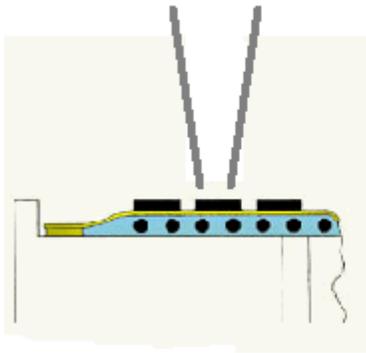


Figure 1.
Retention Mode
No Vacuum

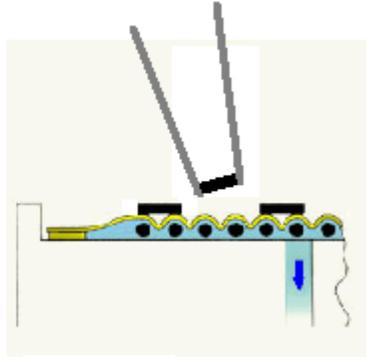


Figure 2.
Release Mode
Vacuum Applied