



Controlled Atmosphere Valve

NE-CAV, NE-PCAV

The Controlled Atmosphere Valve sample tube is a linear valve system for performing controlled atmosphere experiments by NMR. The concentric valve mechanism consists a sturdy, precision machined PTFE plug with a Viton O-ring seal. A glass vacuum adapter is supplied with each CAV. The adapter is the interface between the valve and the vacuum line. The PCAV is supplied with a nut and ferrule so a 1/16 inch line can be attached directly to the manifold.

To use the valve system, first connect it to the vacuum line. With the valve attached and in the open position, vacuum transfers can be made to and from the sample tube. Once the proper sample environment is attained, the valve can be closed and the system can be removed from the vacuum line. The sample can be retrieved in a similar way.

This system is very useful in the study of organometallics or other moisture and air sensitive samples. Note: The Viton O-ring is not recommended for use with ketones, aldehydes, ethers or aliphatic esters. In this case, an optional O-ring, Simriz 485 FFKM, is available.

The knob on the plug is made of Delrin AF and has the following chemical resistance characteristics:

Excellent (no attack): Dilute and Concentrated Acids, Alcohols, Bases, Aliphatic Hydrocarbons and Mineral Oils

Good (minor attack): Vegetable Oils, and Oxidizing Agents

Limited (moderate attack, suitable for short term use): Aldehydes

Poor (not recommended for use): Aldehydes, Esters, Aromatic and Halogenated Hydrocarbons, and Ketones



NE-CAV5



NE-PCAV5