

Tech Tip 0006 - Residual Solvent Sample Packaging



ChromaDex[®] routinely performs residual solvent testing by GC (Gas Chromatography) on raw materials and finished products. Because of the volatile nature of many solvents, proper sampling and packaging is required to obtain representative results.

Please follow the guidelines below and provide this brief training to all employees responsible for packing residual solvent samples.

1. Most residual solvents are volatile at room temperature. That means that they will naturally evaporate out of a sample open to air. Careful sample preparation ensures that the contained solvents do not evaporate out of the sample before testing.
2. When preparing a sample for residual solvent testing, it is important to draw the sample from bulk material to be tested and not just the very top of the storage container. You may choose to either stir up the material or scoop down into the material before taking your sample.
3. Samples must be packaged in a glass vial or bottle for transport to the ChromaDex[®] testing lab. The vial or bottle must be fitted with a tight fitting cap with a PTFE (Teflon) liner in the lid. Plastic bottles or bags must not be used because volatile solvents can permeate through the container wall and compromise results.
4. When packaged, the sample must fill up the entire volume of the glass vial or bottle. There must be no "head space" or air inside the container. This will prevent evaporation of the solvent into the air contained within the sample vial itself.
5. Using an appropriately sized glass vial will allow for proper packaging without requiring large sample sizes. A 4ml vial completely filled to the top provides sufficient sample size for most testing. A suitable vial and cap combination can be purchased from Sigma (part 27141 & 27115-U) or other similar suppliers can be used.
6. Once properly packed under that above guidelines, please do not use tape or parafilm on the vial caps. These products may contaminate the samples.
7. If you are ordering multiple assays for your sample (such as residual solvent and HPLC) be sure to package two separate samples. One sample should be prepared in the method described above specifically for residual solvent testing. The other can be packaged in either an additional vial or a simple plastic baggie.

Correct sampling and packaging procedures will ensure that the results from residual solvent testing are representative of the bulk material. Deviations from the procedures outlined above can yield results which are accurate of the sample provided for testing but inaccurate for the bulk material.