Polymer Diagnostics Inc.

Phthalate Testing - Frequently Asked Questions

Updated February, 2009

Q. **Which specific phthalates is the Consumer Products Safety Information Act (CPSIA) concerned about?**

A. The six phthalate plasticizers of interest are: Diisononyl phthalate (DINP), Di-2-ethylhexylphthalate (DEHP, sometimes called DOP), di-n-octyl phthalate (DnOP), Di-isodecyl phthalate (DIDP), butylbenzyl phthalate (BBP), and dibutyl phthalate (DBP).

Q. **What can Polymer Diagnostics Inc. (PDI) test?**

A. PDI can test raw materials, compounds and finished goods.

Q. **How does PDI perform the testing?**

A. Samples are initially extracted (or diluted), and then analyzed by Gas Chromatography-Mass Spectrometry [GC-MS]. Depending on the results, additional analyses may be done to verify results and insure accuracy. This helps reduce the potential for false positives.

Q. **What about false positives?**

A. Although GC-MS can reduce the likelihood of mis-identification, the complexity of many formulations cannot rule this out. Further refinements of the analysis conditions or use of other separation techniques helps to enhance the reliability of the results. In those cases where the interference cannot be eliminated, results will clearly state this fact.

Q. **What is the current standard for testing for phthalates?**

A. Some literature has cited ASTM 3421-75 as applicable for this testing. This method has been discontinued by ASTM, and has not been replaced. The regulatory body responsible for the CPSIA is currently working on recommending an improved method, but this is still in the planning stage.

Q. **What are the current issues, if any, with the test methods?**

A. Any method recommended should use current analytical methodologies. It should also minimize false positives, and be flexible enough to handle complex as well as simple systems and formulations. Because of these complexities, the regulatory body responsible for the CPSIA has solicited comments in order to attempt to understand how the testing should be conducted. PDI has responding to the solicitation based on its experience with this testing that demonstrate that proper procedures must be followed to ensure reliable results.

Q. **What is PDI doing to resolve these issues?**

A. PDI is gathering experimental evidence on a series of test specimens, and documenting the potential issues with the interpretation of test results so as to give guidance to customers. PDI is also planning to submit for publication a technical paper on methods and results once the study is completed.

Q. **What is the current limit for the six phthalates?**

A. The current guideline is that the product in question should contain less that 0.1% by weight of any of the suspect phthalate plasticizer.

Q. **What services does PDI supply to customers for testing for these phthalate plasticizers?**

A. PDI will test raw materials, intermediate compounds and finished goods for the six phthalates. If a test shows an unexpectedly elevated concentration, we can also help you isolate the source for the banned phthalate, such as from a process contamination, a raw material, or other source.

Q. **Does PDI function as and independent third party laboratory for this testing?**

A. PDI is accredited under ISO 17025 by A2LA (the American Association for Laboratory Accreditation) to perform testing as an independent laboratory body. Our scope of accreditation currently includes an in-house method for plasticizer determination in polyvinyl chloride polymers.

Q. **How do I contact PDI for assistance?**

A. You may email us via our web site at www.polymerdiagnostics.com or you may phone us at 800-438-2355.