

Agricultural Handlers Exposure Task Force, L.L.C.

Development and Utilization of Surrogate Compounds in Generic Field Monitoring Studies

AHETF field monitoring studies utilize surrogate products that are selected and developed to represent 1) normal agricultural use patterns, 2) typical product handling and application equipment, 3) common types of formulations, 4) common packaging, and 5) standard worker activities representative of the geography, crop and seasonality of product use. To date, the AHETF has developed the following six (6) products for use as surrogates in their field monitoring program.

Acephate	Diazinon
Carbaryl	Malathion
Chlorothalonil	Simazine

There are requirements associated with identifying and developing suitable crop protection products for use as surrogates in AHETF field monitoring studies. To be successful, it is critical to develop a range of surrogate compounds to support the field monitoring studies.

Surrogate-Product Development and Use Considerations:

1. **Product Registration:** Acceptable surrogate product must be registered at both the Federal and State levels and should be available in a variety of formulations, packaging and delivery systems.
2. **Usage:** The product must be approved for use on a wide variety of crops with a broad range of product use rates and seasonal use patterns.
3. **Active Ingredients:** To ensure the generic utility of the field monitoring data, a range of surrogate products are required for development and use in the monitoring program.
4. **Baseline Exposure Data:** To generate data with the greatest generic applicability, it is important to develop surrogates that do not have exposure mitigation requirements that might interfere with the ability to employ field monitoring results as generic data. A product that has unique personal protective equipment or engineering control requirements would not provide study results applicable to a wide range of other crop protection chemicals.
5. **Analytical Methodologies:** Each surrogate product must be supported with robust analytical methods that have been developed and validated for the various study matrices. It is critical that these methods have corresponding low limits of quantification to minimize the potential for non-detectable results in field monitoring studies. Excessive non-detects can lead to difficulties in translating the specific field study results into useful terms in a generic database.