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OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

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MEMORANDUM

SUBJECT: Comments on Submitted Protocols for Aqueous Availability and Photodegradation on Wood Surface Studies for: 5-Chloro-2-Methyl-4-Isothiazolin-3-One (PC Code 107103) and 2-Methyl-4-Isothiazolin-3-One (PC Code 107104)

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The Agency has requested aqueous availability and photodegradation on wood surface data in order to determine the potential release of 5-Chloro-2-Methyl-4-Isothiazolin-3-One (PC Code 107103) and 2-Methyl-4-Isothiazolin-3-One (PC code 107104) in water and the fate of these chemicals on pressure treated wood that may be exposed to sunlight for extended periods of time. The submitted protocols appear to form a sound scientific basis for obtaining these data, but EFGWB recommends the following changes in the protocols:

Protocol for the Aqueous Availability Study:

1. The registrant has not proposed a sampling schedule. EFGWB recommends that a minimum of six regularly spaced, duplicate samples be taken to determine the rate of release of the test substance as well as the rate of appearance and decline of the degradation products. A study duration of 30 days is usually sufficient to define the rate of release of these chemicals to water.
2. If samples are to be stored prior to analysis, appropriate storage stability data must be provided.
3. The two active ingredients in the water samples must be analyzed by valid analytical methods. If analytical techniques such as TLC or HPLC are employed to characterize the test substance, another confirmatory technique such as GC/MS must be used to confirm the identity of the chemical. The analytical procedures must be adequately described.
4. The registrant must make a reasonable attempt to identify and quantify all degradates produced in greater than 10% yield at any sampling event during the course of the study. EFGWB recommends that N-methyl malonamic acid be screened as one of the analytes because it has been identified as one of the major degradates in the submitted hydrolysis study (MRID 42681301).

Protocol for the Photodegradation on Wood Study:

1. The registrant has proposed that the treated wood would be exposed to xenon light continuously (24 hours/day) for 15 days. EFGWB accepts the continuous irradiation of samples for 15 days. However, if the registrant decides to employ a light and dark cycle (12 hours light and 12 hours dark per day), the exposure to xenon light must be continued for a minimum of 30 days.
2. The registrant has not proposed a sampling schedule. EFGWB recommends that samples should be taken for analysis at four or more time intervals with at least one sample taken after one half-life or at 30 days of exposure, whichever comes first. The number and timing of the samples will depend on the half-life of the compound and should define the pattern of decline of the parent as well as rate of appearance and decline of the photodegradation products.
3. If samples are to be stored prior to analysis, appropriate storage stability data must be provided.

4. The two active ingredients in the treated samples must be analyzed by valid analytical methods. If analytical techniques such as TLC or HPLC are employed to characterize the test substance, another confirmatory technique such as GC/MS must be used to confirm the identity of the chemical. The analytical procedures must be adequately described.
5. EFGWB recommends that the registrant make a reasonable attempt to identify and quantify all degradates which exceed 10% (yield) of the initial concentration of the active ingredient at all sampling intervals during the course of the study.