

Cholinesterase

Policy

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Revision Date 06/22/18

Applies To: All employees who use cholinesterase inhibiting pesticide products in their work environment.

All pesticide applicators using cholinesterase inhibiting pesticide products in their work environment have a Medical Surveillance Program available and are encouraged to utilize it.

- The Medical Surveillance Program consists of an initial baseline blood sample collection prior to exposure to organophosphate and carbamate containing pesticide products.
- Then additional samples will be collected following application of any of these types of products to assess cholinesterase activity, as noted on the attached Pesticide Policy.
- The sample collection **must** occur within 48 hours application or potential exposure.

Cholinesterase Inhibiting Pesticide Products

Cholinesterase inhibiting pesticide products include but are not limited to:

- Dursban Granules
- Empire, Killmaster II
- Musca-cide Fly Bait
- Orthene, PT 470 Regulator
- Safrontin
- Sevin
- Ficam
- Malathion

Process

1. The medical monitoring will consist of an initial baseline blood sample collected prior to application of the above mentioned compounds. This will establish a baseline value for cholinesterase activity in plasma and red blood cells. Consideration **must** be given to work activities prior to employment with the University.
2. After establishing a baseline value, routine testing will be conducted within 48 hours of applying organophosphate or carbamate products. The results of this testing will be compared to the baseline value.
3. If an overexposure has occurred, a decline in cholinesterase activity will be evident in the plasma before it is evident in the red blood cells. When the exposure stops, the plasma activity will restore at a faster rate than red blood cell activity. The guideline for overexposure values has been set at 70% of the baseline value for red blood cells and 60% of the baseline value for plasma. If these levels

are reached, workers shall be restricted from applying the organophosphate pesticides until both the plasma and red blood cell activity levels return to 80% of baseline.

4. OHS will provide the results of the testing to Environment, Health & Safety (EHS). Then EHS will provide the written results to the Departmental Contact within 10 days of receipt for distribution to the employee.

Testing Information

Employees should report to the Occupational Health Services clinic on a walk-in basis (with the attached Cholinesterase Testing Referral Form) within 48 hours of use of any organophosphate or carbamate containing pesticide product to have a blood sample collected to measure their cholinesterase activity. No appointment is necessary.

NOTE: During the employee's annual Medical Surveillance Physical (for respirator use, noise exposure, etc.) the employee's blood will not be drawn, unless there has been an application of organophosphate or carbamate products within the previous 48 hours.

Revision History

REVISION #	DATE	REVISION #	DATE	REVISION #	DATE	REVISION #	DATE
1	4/5/12	3	6/22/18				
2	1/31/18						