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**Systems Integration Group, Inc.**

PM04 1812-407 4/29/99 S561444 1 of 15

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 29 1999

Mr. Darryl Brock
Registration Specialist, Ag Insecticides
Griffin Corporation
P.O. Box 1847
Valdosta, GA 31603-1847

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Dear Mr. Brock:

Subject: Change in MOS and Various Label Amendments
Including Additional Uses
Atrapa ULV
EPA Reg. No.1812-407
Labeling Submitted April 23, 1999

The labeling amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, As Amended (FIFRA), is acceptable, provided that you:

1. Submit one copy of your final printed label incorporating the following corrections before you release the product for shipment.

a. The revisions described below are needed to bring your label into agreement with the product label registered for the company on whose data you are relying.

- Add the following statements to the directions for use on alfalfa and clover: Do not apply during bloom. Do not use on seed alfalfa.

- Under the heading, FIXED WING AIRCRAFT, make the following corrections: In the first sentence, correct the speed from 100 mph or more to 150 mph or more. In the last sentence, correct 1% to 10 %.

- Change the personal protective equipment ,waterproof gloves to chemical-resistant gloves.

- Add the following statement to the USER SAFETY RECOMMENDATIONS: Remove PPE immediately after handling this product. Wash the outside of gloves before removing . As soon as possible, wash thoroughly and change into clean clothing.

b. In the section headed, OTHER AGRICULTURAL USES, delete the entire statement, "Do not graze or feed grain sorghum forage, fodder/ stover, or hay." Your label does not bear claims or directions for use on grain sorghum.

c. Under STORAGE and DISPOSAL, add the following statements so the label is consistent with your technical product label: Should not be stored at temperatures exceeding 25 degrees C (77 degrees F). It should never be heated above 55 degrees C (13 degrees F) and also local heating above this temperature should be avoided.

2. Submit the revised data matrix incorporating the corrections described below prior to releasing the subject product for shipment.

a. The references to your earlier submitted test methods ( MRID nos. 42365505 and 42869302 ) which are referenced in the product chemistry data submitted for your technical product, were submitted by Griffin under other unrelated product registrations. As such, they should not be listed separately on the data matrix. They should be listed in the same MRID number block of the data matrix as the malathion data for which they were referenced.

b. Add the MRID 44274705 to the product chemistry data listing under 62-3 (180.1800). This study, which was submitted by Griffin Corporation was reviewed and found adequate in the product chemistry review of December 29, 1997..

3. Submit the following information within 12 months of this acceptance letter. 830.6320: corrosion characteristics. This is product specific data which, according to our files, was not included in the review of your technical product registered under EPA Reg. No. 1812-398.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Our files for the subject product have been revised to reflect the change in method of support (MOS) under the data compensation regulations from formulator's exemption to the selective MOS and, for certain data requirements, to the cite-all option under the selective method.

It is understood that the amended basic Confidential Statement of Formula (CSF) dated March 25, 1999 replaces all other CSFs submitted for the subject product.

Sincerely,

Marilyn A. Mautz
Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

# Atrapa™ ULV

**A Premium Grade Malathion For Ultra Low Volume Application**

**An Insecticide For Use on Listed Vegetables, ~~and~~ /Field Crops, ~~Also~~ and ~~Agricultural~~/Non-Agricultural Use for Adult Mosquito Control.**

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 1812-407

ACTIVE INGREDIENT:

| | |
|---|---|
| Malathion: 0,0-dimethyl phosphorodithioate of diethyl mercaptosuccinate | 96.5% |
| INERT INGREDIENTS: | 3.5% |
| TOTAL | 100.0% |

This product contains 9.9 lbs. Malathion per gal.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

STATEMENT OF PRACTICAL TREATMENT (Moved from next page)
Organophosphate

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

| | |
|---|---|
| IF SWALLOWED: | Call a physician or Poison Control Center immediately. Induce vomiting by giving victim one or two glasses of water and insert finger in back of throat. Repeat until vomit fluid is clear. Do not induce vomiting or give anything by mouth to an unconscious person.<br>NOTE TO PHYSICIAN: Malathion causes cholinesterase inhibition. Atropine is antidotal. |
| IF INHALED: | Remove victim to fresh air. Apply respiration if indicated. |
| IF ON SKIN: | Wash immediately with plenty of soap and water. |
| IF IN EYES: | Flush eyes with plenty of water. Call a physician immediately. |

~~Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)~~ (moved above)

~~For medical emergencies involving this product call toll free 1-800-237-1854~~

SEE ~~SIDE PANELS~~ LABEL FOR ADDITIONAL PRECAUTIONS ~~AND STATEMENT OF PRACTICAL TREATMENT~~ AND DIRECTIONS FOR USE

**NET CONTENTS:**

**EPA REG. NO. 1812-407**

**EPA EST. NO.** ____

~~MANUFACTURED FOR~~
**GRIFFIN L.L.C.**
**VALDOSTA, GEORGIA 31601**

Note: Spanish language is optional.

~~(Side Panels)~~

## PRECAUTIONARY STATEMENTS
## HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)
## CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Avoid breathing spray mists and avoid contact with skin.

**PERSONAL PROTECTION EQUIPMENT:** Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks

Follow manufacturers instructions for cleaning/maintaining Personal Protective Equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls Statements: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### USER SAFETY RECOMMENDATIONS

**USERS SHOULD:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

(This section moved to front panel.)

### ~~STATEMENT OF PRACTICAL TREATMENT~~
### ~~Organophosphate~~

| | |
|---|---|
| ~~IF SWALLOWED:~~ | ~~Call a physician or Poison Control Center immediately. Induce vomiting by giving victim one or two glasses of water and insert finger in back of throat. Repeat until vomit fluid is clear. Do not induce vomiting or give anything by mouth to an unconscious person.~~ |
| | ~~NOTE TO PHYSICIAN: Malathion causes cholinesterase inhibition. Atropine is antidotal.~~ |
| ~~IF INHALED:~~ | ~~Remove victim to fresh air. Apply respiration if indicated.~~ |
| ~~IF ON SKIN:~~ | ~~Wash immediately with plenty of soap and water.~~ |
| ~~IF IN EYES:~~ | ~~Flush eyes with plenty of water. Call a physician immediately.~~ |

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, and aquatic life stages of amphibians. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in areas near the application site. Do not contaminate water when disposing of equipment washwaters. Do not apply this product through any type of irrigation system.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the area.

## PHYSICAL OR CHEMICAL HAZARDS

~~Large Spray droplets of this product undiluted can permanently damage automobile paint. Care must be taken not to spray automobiles. If accidental exposure occurs, the car should be washed immediately as soon as possible.~~ ~~Before using, read the directions contained in this labeling for the proper methods and procedures which must be followed to achieve effective insect control and avoid permanent damage to automobile and other paint finishes.~~

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. READ ENTIRE LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment(PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

## AGRICULTURAL USES

Atrapa ULV is used undiluted in specially designed fixed or rotary wing aircraft, or ground equipment, capable of applying ultra low volumes for control of the insects indicated below. ~~Do not make application when winds exceed 5 mph.~~ Spray machines must be equipped with accepted low volume devices that will produce droplets within the range of 30 to 100 microns in size. Apply only when weather conditions are favorable. Wind and rising air currents may cause undesirable spray drift and reduce insect control.

Mist blowers and boom sprayers utilizing a controlled air flow to facilitate particle size and spray deposition may be used at a vehicle speed of 4 to 10 mph.

Mist blowers with a pump capable of producing up to 40 psi and blower speeds of 2600 rpm are satisfactory. Use flat fan nozzles, 8001 to 8002, placed 30° into air blast of rotary atomizers into the air blast that produce an efficient spray particle with a mass medium diameter of 40 to 100 microns. Swath widths should not exceed 30 feet~~, and applications should not be made when winds exceed 5 mph~~. Other similar application equipment which has demonstrated the capability to deliver even distribution of the labeled rate over the desired area may be used. Apply only when weather conditions are favorable. Wind and rising air currents may cause undesirable spray drift and reduce insect control.

Boom sprayers with a filtered rotary air compressor, either PTO or gas engine driven or an air pump capable of producing at least 12 psi are satisfactory. Use air pressure on chemical tanks and an accurate metering valve to assure a calibrated flow of the liquid pesticide mixture. Air should be regulated with a relief valve and gauge for proper air and liquid mixture. Pneumatic-type spray nozzles, as suggested by equipment manufacturer, should be used for spray particles with mass medium diameter of 30 to 100 microns. Apply only when weather conditions are favorable. Wind and rising air currents may cause undesirable spray drift and reduce insect control.
~~Applications should not be made when winds exceed 5 mph.~~

Repeat applications should be made as necessary, unless otherwise specified.

Consult your State Experiment Station or State Extension Service for proper timing of sprays.

**IMPORTANT:**
Undiluted spray droplets of Atrapa ULV will permanently damage automobile paint. Cars should not be sprayed. If accidental exposure does occur, the car should be washed immediately.

**ALFALFA & CLOVER:** To control Grasshoppers, Alfalfa weevil larvae, and Armyworms, use 8 fluid ounces of Atrapa ULV per acre. Treat in Spring when crop is 2 to 6 inches high or when infestation is noticed. Do not apply during full bloom. No time limitation required between treatment and harvest provided treatment does not exceed 8 ounces per acre. In case of severe infestation, use 8 to 16 fluid ounces of Atrapa ULV per acre. When using more than 8 ounces per acre, allow 5 days between treatment and harvest.

**BARLEY, OATS, RYE, WHEAT:** To control Cereal leaf beetle, use 4 to 8 fluid ounces per acre of this product when infestation is noticed. Do not apply within 7 days of harvest or grazing.

**BEANS (LIMA, GREEN, SNAP, NAVY, RED KIDNEY, WAX, DRY, BLACKEYE):** To control Mexican bean beetle, Japanese beetle and Leafhoppers, use 8 fluid ounces of Atrapa ULV when infestation is noticed. Make one or more applications as necessary. Do not apply within 1 day of harvest. Grazing or feeding of the treated crop foliage (vines/forage and straw/hay) by livestock are prohibited.

**CHERRIES:** To control cherry fruit fly, use 12-16 fluid ounces of Atrapa ULV per acre. Do not treat within 1 day of harvest. Apply by aircraft only. Use higher rate when foliage is heavy or infestation is severe. Make first application as soon as flies appear.

**CORN (FIELD, POP AND SWEET):** To control Cereal leaf beetle, use 4 to 8 fluid ounces of Atrapa ULV per acre, repeating treatment if necessary. Do not treat within 5 days of harvest of grain or forage use.

**COTTON:** In early season to control Thrips, Fleahoppers, and Leafhoppers, use 4 to 8 fluid ounces of Atrapa ULV per acre. To control Boll weevil during early to mid to late season, use 8 to ~~12~~ 16 fluid ounces of Atrapa ULV per acre. ~~For late season control of Boll weevil, increase dosage to 16 fluid ounces per acre.~~

To control Grasshoppers, use 8 fluid ounces per acre.

To control Lygus bugs, use 8 to 12 fluid ounces per acre. For very heavy migrating populations, increase dosage to 16 fluid ounces per acre.

Repeat treatments as necessary up to harvest.

Atrapa ULV can be used alone as a ULV concentrate spray or diluted in once-refined cottonseed or vegetable oil sufficient to make at least one quart of finish per acre.

**GRASS CROPS (GRASS AND GRASS HAY):** To control Grasshoppers, use 8 to 10-1/2 fluid ounces of Atrapa ULV per acre. Repeat applications may be needed after hatching and before movement to crops takes place. No time limitation between treatment and harvesting of hay or grazing.

**RICE (GRAIN FORM):** To control Rice stink bug, use 8 fluid ounces of Atrapa ULV per acre making application during the early milk and dough stage of growing rice. Broadcast used only over intermittently flooded areas: Application may not be made around bodies of water where fish or shellfish are grown and/or harvested commercially.

***~~Note to U.S. EPA Reviewer: ADULT MOSQUITO CONTROL section below (and USE ADVISORY) is replaced with corresponding text from product with EPA Registration Number 4787-8, and an OTHER AGRICULTURAL USES section is created.~~***

**~~OTHER AGRICULTURAL USES~~**

~~Alfalfa, Clover, Pasture and Range Grass, Grass and Grass Hay, Grains Crops (barley, corn, oats, rye, rice, sorghum/milo, wheat), Beans and non-agricultural lands (wastelands): Adult mosquitos and flies: Apply Atrapa ULV at the rate of 2 to 4 fluid ounces per acre for control of adult mosquitos and at 6 to 8 fluid ounces per acre for control of adult flies and mosquitoes. Repeat applications as necessary. Alfalfa, clover, pasture and range grass, grass and grass hay may be applied on days of harvest or grazing. Do not apply to alfalfa or clover in bloom. Do not use grass, alfalfa or grain crops, make no application within 7 days of harvest or forage use, or corn within 5 days of harvest or forage use, within 7 days of harvest on beans within 1 day of harvest. Do not graze or feed grain, sorghum forage, fodder, stover or hay.~~

~~**ADULT MOSQUITO CONTROL:** Use 2-0.3 to 4 fluid ounces of Atrapa ULV per acre to control adult mosquitoes on crop-producing and non-agricultural lands (wastelands, roadsides, soil bank lands), in rural or urban locations. Repeat applications as necessary.~~

~~USE ADVISORY~~

~~IMPORTANT: To be applied only by trained personnel such as of public health organizations, mosquito abatement districts, or pest control operators or other licensed applicators~~

~~Griffin recommends:~~

~~• Fixed wing aircraft is operated at 125 100 miles per hour or more.~~
~~• Rotary wing aircraft do not exceed maximum nozzle flow capacity not exceed the 4 fluid ounce per acre maximum application rate when used for mosquito control.~~
~~• Apply during favorable weather conditions.~~
~~• Vehicle speed for ground control up to 20 miles per hour.~~
~~• Adult mosquito control over cities, towns and other areas where painted surfaces are present, follow labeled use rates. For further protection against vehicle paint damage, ground ULV MMD/VMD should not exceed 17 microns, with no droplets larger than 32 microns from the ground and 100 microns from the air.~~
~~• Adult mosquito control applications, adjacent to or over the crops listed on the label, not to exceed specific crop maximum application rates.~~

## MOSQUITO CONTROL

**MOSQUITO CONTROL IN POPULATED AND RURAL AREAS**
**IMPORTANT NOTICE: TO BE APPLIED ONLY BY TRAINED PERSONNEL OF PUBLIC HEALTH ORGANIZATIONS, MOSQUITO ABATEMENT DISTRICTS OR PEST CONTROL OPERATORS.**

**NOTE FOR AQUATIC USES:** Broadcast use only over intermittently flooded areas. Application may not be made around bodies of water where fish or shellfish are grown and/or harvested commercially.

**AERIAL APPLICATION:** ADULT MOSQUITO CONTROL OVER CITIES, TOWNS, AND OTHER AREAS WHERE AUTOMOBILES, TRAILERS, TRUCKS, AND PLEASURE BOATS ARE PRESENT.

Apply 2.6 to 3.0 fluid ounces of Atrapa ULV per acre. Apply only when weather conditions are favorable. Wind and rising air currents may cause undesirable spray drift and reduce insect control.

IMPORTANT: IN AREAS WHERE AUTOMOBILES, TRAILERS, TRUCKS AND PLEASURE BOATS ARE PRESENT. Undiluted spray droplets of Atrapa ULV will permanently damage vehicle paint finishes unless the aircraft used for the ultra low volume application meets all of the following specifications:

**FIXED WING AIRCRAFT**
Aircraft is operated at ~~150~~ 100 mph or more.
There are no leaks in the ultra low volume spray system.
Nozzles are placed on the boom at a 45° angle down and into the wind.
Diaphragm check valves are used on all nozzles to insure positive cut off of the spray.
Dosage of Atrapa ULV does not exceed 3 fluid ounces per acre.
The spray system produces droplets of this product in the 50 to 60 mass median diameter (MMD) micron range, with no more than 1% of the droplets exceeding 100 microns as determined be readings made from microscope slides coated with DRI-FILM* OR TEFLON.**

* = Trademark of General Electric Company
** = Registered Trademark of E.I. DuPont de Nemours & Co., Inc.

**HELICOPTERS**

Equipment Specifications

1. Rotary nozzle equivalent to Beecomist Spray Head Assembly Model No. 650 equipped with:
   a) A direct reading RPM tachometer or low RPM signal light readily visible to operator.
   b) A stainless steel porous metal sleeve, 20 micron pore size, dynamically balanced to the nozzle.
   c) A diaphragm check valve as near to the rotary nozzle as possible to ensure positive cut-off of the spray.
   d) Nozzle on-off switch separate from main switch and nozzle switch.

2. Minimum no-load nozzle speed of 10,500 RPM.
3. A continuous non-pulsating metered flow must be maintained by a variable speed metering pump equipped with:
   a) A positive cut-off valve between tank and pump.
   b) A flow gauge or tachometer visible to operator.
   c) A pump on-off switch separate from main switch and nozzle switch.

4. Maximum flow rate of 0.5 gallon per minute per nozzle.
5. Rotary nozzle must be mounted behind and below the boom with the sleeve directed toward the rear of the aircraft and parallel to the ground during light. Nozzle must be positioned to minimize air turbulence and the collection of Atrapa ULV droplets on mounting brackets, feed lines, fittings, etc., or any part of the aircraft.

**OPERATING PROCEDURES**

1) Atrapa ULV must be pre-filtered through a 10 micron filter prior to transfer into aircraft tank when using the rotary type nozzles described above. A 50 mesh stainless steel line strainer must be installed in the pump feed line.
2) Entire system, including tank, pump, nozzle and feed lines, to be used only for application of Atrapa ULV.
3) Entire system must be inspected daily to insure that there are no leaks.
4) Sleeve must be removed and cleaned immediately after each use by washing with hot water and blowing dry from outside in with clean air.
5) Rotating nozzle must be turned on and operating before turning on pump. For shut off, pump must be shut off and lines cleaned prior to stopping nozzle rotation.
6) Dosage of Atrapa ULV does not exceed 3 fluid ounces per acre.
7) The spray system must product droplets of Atrapa ULV with a mass median diameter (MMD) of less than 50 microns, with no more than 2.5% of the droplets exceeding 100 microns, as determined by readings made from microscope slides coated with DRI-FILM* or TEFLON**.

**GROUND APPLICATION**

**Thermal Aerosols or Fogs**

For control of adult mosquitoes with thermal aerosols or fogs, apply Atrapa ULV at the rate of 6 – 8 oz. actual/gallon (3.9 – 5.2 gallons Atrapa ULV in 100 gallons finished solution*) by ground equipment delivering 40 gallons per hour at a vehicle speed of 5 miles per hour to treat a swath width of 300 – 400 feet.

*There is a great variation in the chemical composition of fuel oils which may be used as thermal fog solvents. These differences may cause sludge and/or affect the solubility of the Atrapa ULV.

**Nonthermal Aerosols**

Adult Mosquito Control – Control of adult mosquitoes over a 300-foot swath can be obtained with non-thermal aerosols of Atrapa ULV using the following rates at the indicated vehicle speeds:

| Vehicle Speed Miles per Hour | Flow rate of Atrapa | Maximum Flow Rate per Hour |
|---|---|---|
| | Fluid oz./min. | |
| 5 | 1.0 to 2.1 | 1 gallon |
| 10 | 2.0 to 4.3 | 2 gallons |
| 15 | 3.0 to 6.3 | 3 gallons |
| 20 | 4.0 to 8.5 | 4 gallons |

**ADULT STABLE FLIES, OUTDOORS** – Control of adult stable flies around the outside of stables over a 300-foot swath can be obtained with non-thermal aerosols of Atrapa ULV using the ultra low volume method. Use the following flow rates at the indicated vehicle speeds:

| Vehicle Speed Miles per Hour | Flow Rate of Atrapa fluid oz./min. | Maximum Flow Rate per Hour |
|---|---|---|
| 5 | 2.1 | 1 gallon |
| 10 | 4.3 | 2 gallons |

ADULT MOSQUITOES AND FLIES on rangeland, pasture, and other uncultivated non-agricultural areas (wastelands, roadsides). Does not include golf courses.
Apply Atrapa ULV at the rate of 2 to 4 fluid ounces per acre for control of both adult mosquitoes and flies. Application may be made via ground or aerial equipment and may be repeated as necessary.

For enhanced knock-down effects against mosquitoes and flies Atrapa ULV can be mixed with a synergized pyrethrin emulsifiable concentrate (6% pyrethrins & 60% PBO) in accordance with the most restrictive of label limitations and precautions indicated on both this and the tank-mixed product. No label rates should be exceeded. This product may not be mixed with any product bearing a label which specifically prohibits such mixing. Prior to tank mixing large quantities, mix a small amount in a glass jar to verify that the products are physically compatible.

A tank mix of these may be prepared as follows:

| Component | Rapid knock-down | Improved knock-down |
|---|---|---|
| Atrapa ULV | [illegible] fl. oz. | [illegible] fl. oz. |
| Synergized pyrethrin (6%/60%) | 2 [illegible] fl. oz. | [illegible] fl. oz. |

Depending upon your operational needs for knock-down the amount of synergized pyrethrins can be reduced or adjusted. Application rates of Atrapa ULV and droplet distribution requirements remain the same as for Atrapa ULV used alone.

DROPLET SIZE

1) The Mass Median Diameter (MMD) of the droplets should not exceed 17 microns. The MMD is the drop diameter which divides the spray volume into two equal parts; i.e., 50% of the volume are drop sizes below the MMD and 50% are above the MMD.

2) Spray droplets should not exceed 32 microns in size. Three percent of the spray droplets (6 droplets out of 200) can exceed 32 microns providing the MMD does not exceed 17 microns and no droplets exceed a maximum of 48 microns. Larger droplets, when transported by natural air currents, impinge more readily on objects in their pathway and will permanently damage automobile type paints.

3) More than one-half of the total spray mass must consist of droplets in the 6 to 18 micron range to achieve adequate dispersal of insecticide over a 300-foot swath.

4) A minimum of two-thirds, preferably four-fifths of the total spray must consist of droplets not exceeding 24 microns in range.

**OPERATING EQUIPMENT**

Each Non-thermal Aerosol Generator used for dispersal of Atrapa ULV to control adult mosquitos must have minimum capability of producing the droplet spectrum described under DROPLET SIZE. The initial determination of droplet size is made after the unit is installed in a vehicle and prior to its use in mosquito control operations. The unit should be rechecked as frequently as necessary to insure that proper droplet size is maintained for each operation. Determination of droplet size every two months is usually sufficient if the unit has been maintained in good operating condition. Equipment manufacturer's instructions setting forth cleaning and maintenance of the unit must be followed. The unit must be inspected before each operation to correct any leaks or obstructions in the spray system; to detect whether the nozzle, hoses, or other parts are worn and need replacement; to insure that the flow meter is properly calibrated and to determine that the pressure recommended by the manufacturer is being maintained.

| | |
|---|---|
| **Flow Rate** | -Must be regulated by accurate flow meter<br>-Not greater than 1 gallon per hour at 5 mph, 2 gallons per hour at 10 mph, 3 gallons per hour at 15 mph, or 4 gallons per hour at 20 mph |
| **Nozzle Direction** | -Rear of the vehicle<br>-Upward at an angle of 45° or more |
| **Vehicle Speed** | -Not greater than 20 mph<br>-Shut off spray equipment when vehicle is stopped |

**IMPORTANT**-Spray droplets of undiluted Atrapa ULV will permanently damage automobile paint unless all the conditions described and recommended in this label are met. If accidental exposure does occur, the vehicle should be washed at once.

**Directions for Determining the Droplet Size of Atrapa ULV Non-thermal Aerosols:**

***Note – Other methods of determining droplet size may also be used. Such methods must first be validated by the user, to ensure droplet sizes are within label parameters.***

***Permanent records of each droplet size determination must be kept and made available to Griffin L.L.C. upon request.***

**1. Preparation of Slides with DRI-FILM***

Atrapa ULV droplet sizes are determined by depositing a sample of the aerosol on a coated glass slide and measuring the droplets under a high power microscope. Ordinary glass slides must be coated with silicone (General Electric SC-87 DRI-FILM*) prior to sampling to prevent excessive spreading or coalescence of the droplets. The slides are dipped into a 10 percent solution of DRI-FILM* in toluene, drained and dried at about 200° F. for 30 minutes after which they are dipped in acetone, allowed to dry and stored in a tight slide box. Coating solution must be freshly prepared. Do not store coating solution because it will deteriorate. Slides are lightly polished with a soft tissue before using to remove any foreign particles.

**2. Deposition of Atrapa ULV Droplets on Slides**

Droplets should be collected under ideal operating conditions to insure representative sampling of droplets in the aerosol. A sampling of the Atrapa ULV aerosol is deposited on a slide by waving the slide as rapidly as possible perpendicular through the aerosol cloud at a distance of 6 to 10 feet from the point of discharge. The slide speed may be increased by attaching it to a 3 to 4 foot stick by means of a spring paper clip. At least two slides should be exposed to insure an adequate sample. Store slides in a tight slide box for transfer to a location where measurements can be made. Avoid excessive heat during transfer and store in a cool place until measurements can be made. Although label specifications require the aerosol nozzle to be angled upward at 45° or more during operation, it is more convenient to position the nozzle parallel to the ground for droplet sampling. If this is not possible, it will be necessary to be positioned at sufficient height to obtain a representative sampling of the aerosol.

**3) Determination of Atrapa ULV Droplet Sizes**

A microscope with mechanical stage and an eyepiece micrometer are used to determine the size of the individual aerosol droplets. Prior to taking measurements, the division of the eyepiece micrometer must be calibrated into microns by means of a stage micrometer. In the example represented in Table 1, droplets were measured at 400x magnification. At that magnification, each division of the eyepiece was calibrated to equal 3.5 microns.

At least 200 droplets should be measured. Usually this is easily accomplished on one slide. An accurate method is to measure all droplets that pass through the micrometer scale as the slide is moved from one edge to the other by using the mechanical stage. Measurements should not be taken along the margins of the slide. It is more convenient to measure in terms of the divisions of the eyepiece micrometer and then convert these divisions into microns.

The measurements converted into microns must then be corrected for that amount of spread that occurred on the slides. The Atrapa ULV spread factor for silicone-coated slides is 0.5. Therefore in Table 1 each division of the eyepiece actually equals 1.75 microns (3.5 microns times the 0.5 spread factor).

The spread factor for TEFLON**-coated slides is 0.69. The following procedure, as given for silicone-coated slides, would be the same for TEFLON**-coated slides once the value for each eyepiece division has been determined.

The measurements are tabulated and processed as in Table 1. The Maximum Diameter is calculated by converting the diameter of the largest droplet measured into microns. In Table 1, the largest droplet measured had a diameter of 19 eyepiece divisions. Therefore, the Maximum Diameter is 33.3 microns (19 x 1.75 = 33.3).

To determine the Mass Median Diameter (MMD), the accumulative percentages from the last column in Table 1 are plotted against the eyepiece divisions (D) on arithmetic probability paper as in Figure 1.

Directly across from the 50 percent point on the line is the Median droplet size in eyepiece divisions which must be converted to microns. In Figure 1, 9.2 eyepiece divisions times the conversion factor of 1.75 equals a Mass Median Diameter of 16.1 microns.

Table 1 - Representative Count of Atrapa ULV Aerosol Droplets impinged on Microscope slides Coated with DRI-FILM*

| Eyepiece Divisions (D)* | No. of Droplets (N) | D x N | % of Total D x N Sum (D x N) | Accumulative Percentages |
|---|---|---|---|---|
| 1 | 5 | 5 | 0.31 | 0.31 |
| 2 | 10 | 20 | 1.22 | 1.53 |
| 3 | 9 | 27 | 1.65 | 3.18 |
| 4 | 12 | 48 | 2.93 | 6.11 |
| 5 | 15 | 75 | 4.58 | 10.69 |
| 6 | 12 | 72 | 4.4 | 15.09 |
| 7 | 25 | 175 | 10.70 | 25.79 |
| 8 | 14 | 112 | 6.85 | 32.64 |
| 9 | 28 | 252 | 15.40 | 48.04 |
| 10 | 19 | 190 | 11.61 | 59.65 |
| 11 | 14 | 154 | 9.41 | 69.06 |
| 12 | 10 | 120 | 7.33 | 76.39 |
| 13 | 6 | 78 | 4.77 | 81.16 |
| 14 | 4 | 56 | 3.42 | 84.58 |
| 15 | 11 | 165 | 10.09 | 94.67 |
| 16 | 2 | 32 | 1.96 | 96.63 |
| 18 | 2 | 36 | 2.20 | 98.83 |
| 19 | 1 | 19 | 1.16 | 99.99 |
| **Total** | **199** | **1,536** | | |

*Measurements were taken at 400X magnification. Each eyepiece division equals 1.75 microns (3.5 microns X the 0.5 spread factor).

Also, for use in accordance with the recommendations and instructions issued by the United States Department of Agriculture for quarantine programs. To be used only by or under the direction of Federal/State personnel for quarantine treatments.

**FIGURE 1**

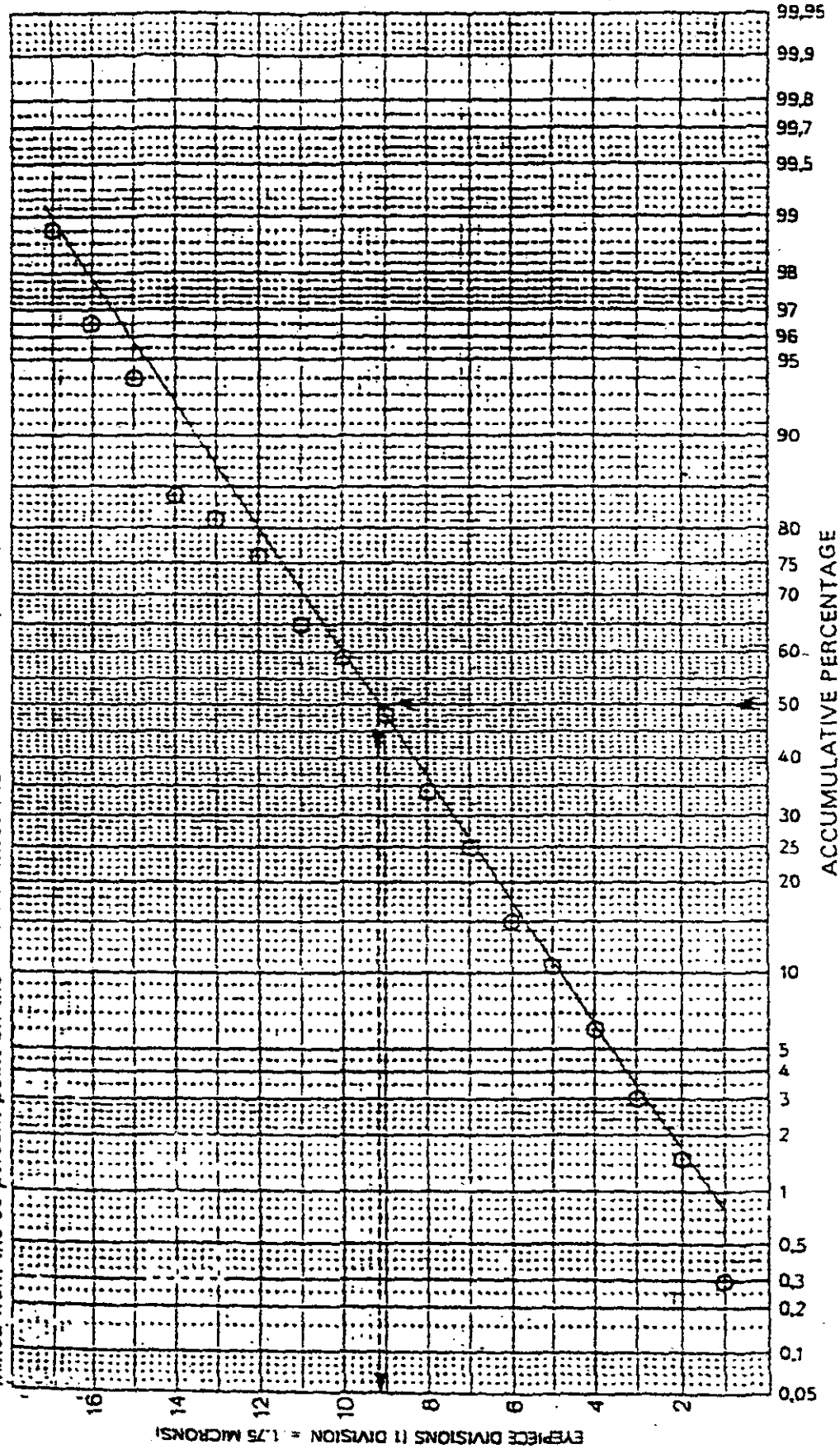


*Figure 1.*
*Percentage of the total volume of aerosol samples below each stated droplet size (from Table 1). The Mass Median Diameter is determined from the 50 percent point on the line. The Mass Median Diameter (MMD) = 9.2 divisions times 1.75 = 16.1 microns.*

## STORAGE AND DISPOSAL

**STORAGE:** Store in a cool, dry area. Always store pesticides in a secured warehouse or storage building. Do not store near seeds, fertilizers, insecticides or fungicides. Keep containers closed and away from heat, sparks and open flame. Containers should be opened in well-ventilated areas. Do not contaminate water, feed or foodstuffs by storage or disposal.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed labeled container for proper disposal. Apply liquid household bleach to contaminated area. Scrub thoroughly using long handled brush. Let stand for 15 minutes. Wash area thoroughly with water.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

## WARRANTY STATEMENT

GRIFFIN warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of GRIFFIN. In no case shall GRIFFIN be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. The exclusive remedy of any buyer of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall not exceed the purchase price paid for this product or, at Griffin Corporation's election, the replacement of this product. GRIFFIN MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESSED OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.