

**Directions for Determining the droplet size of
— FEFANON ULV —
nonthermal aerosols**

Permanent records of each droplet size determination must be kept and made available to — CHEMINOVA — upon request

I. Preparation of Slides with DRI FILM

— FEFANON 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 3 1/2 x 1 1/2 glass slides must be coated with Silicone (Genie — SDC 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 dropped 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.

**II. Deposition of
— FEFANON ULV — Droplets on Slides**

Droplets should be collected under ideal operating conditions to insure representative sampling of droplets in the aerosol. A sample of the — FEFANON ULV — aerosol is deposited on a slide by waving the slide as rapidly as possible perpendicular through the aerosol cloud at a distance of 25 feet from the point of discharge. The slide velocity may be increased by attaching it to a 3 or 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 transit and store in a cool place until measurements can be made.

Although labels specify that the slides are to be used at 45° angles, the slides are used at 90° angles to the spray. The nozzle should be held perpendicular to the slide.

not possible it will be necessary to be positioned at a sufficient height to obtain a representative sample of the aerosol.

**III. Determination of — FEFANON ULV —
Droplet Sizes**

A micrometer with mechanical stage and an eyepiece micrometer are used to determine the size of the individual aerosol droplets. Care is taken to insure that the divisions of the eyepiece micrometer must be calibrated. — divisions 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 1.75 microns.

At least 200 droplets should be measured. Usually this is easily accomplished in 10 minutes. 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.

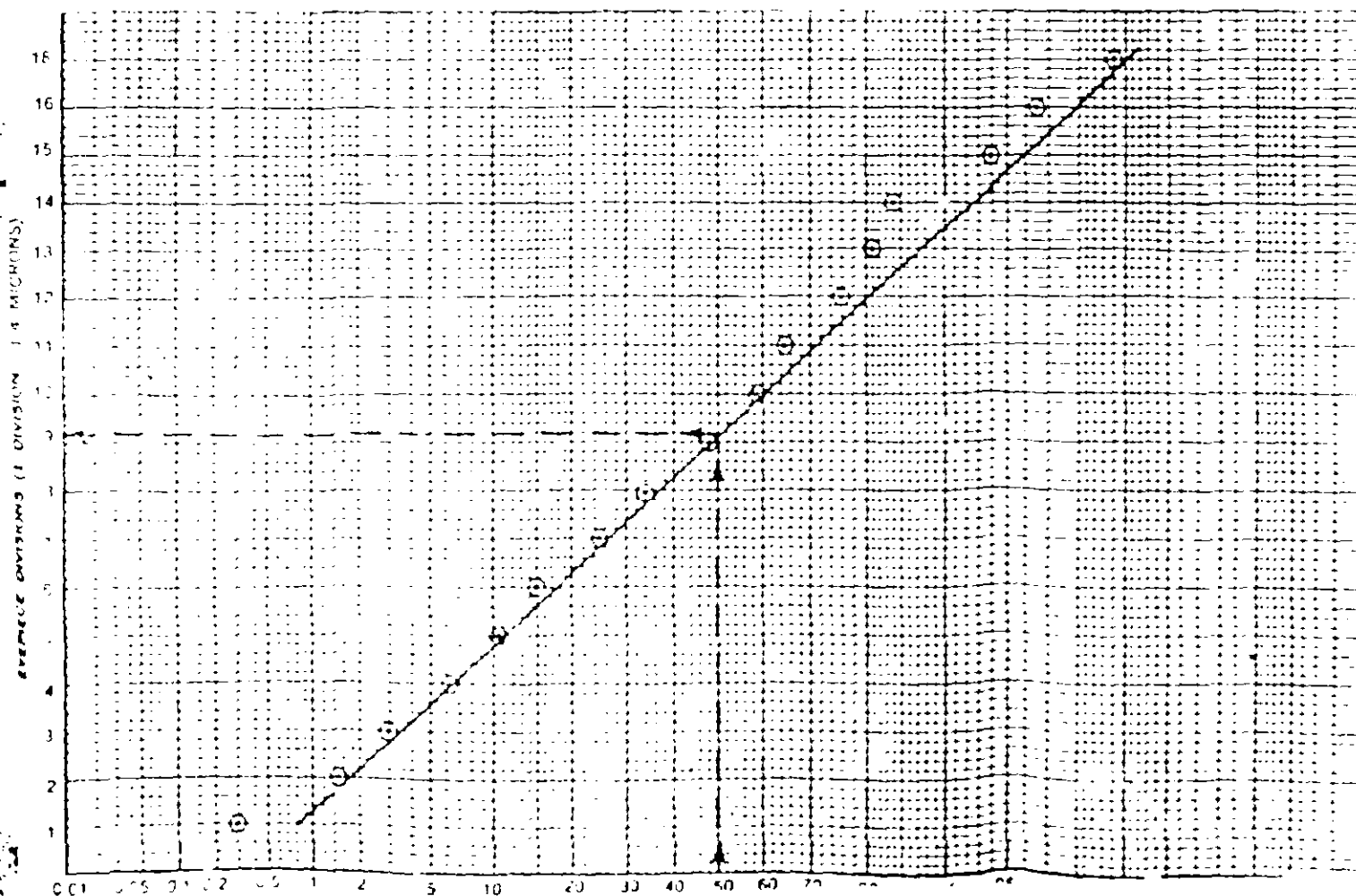
The measurements converted into microns must then be corrected for the amount of spread that occurred on the slides. The — FEFANON ULV — spread factor for silicone-coated slides is 0.5. Therefore, in Table 1, each division of the eyepiece actually equals 1.75 microns (3.5 microns times the 0.5 spread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

The spread factor for TEFALON coated slides is 0.69. The following procedure as given for silicone coated slides would be the same for TEFALON 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 into microns. In Figure 1, 42 eyepiece divisions times the conversion factor of 1.75 equals a Mass Median Diameter of 16.1 microns.

Figure 1
Percentage of the total mass of aerosol samples below a certain droplet size from Table 1. The Mass Median Diameter is determined from the 50 percent point on the line. The Mass Median Diameter (MMD) = 42 divisions times 1.75 = 16.1 microns.



Date _____

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Trans Chemic Industries
150 Meadowlands Parkway
Secaucus, NJ 07094

Gentlemen:

Subject: Tyfanon ULV Ultra Low Volume Concentrate Insecticide
EPA Registration No. 4787-8
Your Application Dated May 15, 1986

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Make the following labeling changes before you release the product for shipment bearing the amended labeling. Revise the Bee Precautionary Statements section to read:

This pesticide is highly toxic to bees exposed to direct treatment or to residues remaining on the treated area. Do not apply when bees are actively visiting the crop, cover crop, or weeds blooming in the treated area

and place it under the heading Environmental Hazards.

2. Submit five (5) copies of your final printed labeling before you release the product for shipment.

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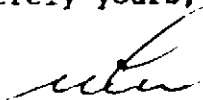
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If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

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

Sincerely yours,



William H. Miller
Product Manager (16)
Insecticide-Rodenticide Branch
Registration Division (TS-767C)

Enclosure

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PRECAUTION

Active ingredient:	
Malathion**	95.0%
Inert ingredients	5.0%

***O,O dimethyl phosphorodithioate of diethyl mercaptosuccinate**
(1 gallon contains 9.79 pounds of malathion)

Harmful by swallowing, inhalation or skin contact

Avoid breathing spray mist • Avoid contact with skin • Wash thoroughly after Handling
Change contaminated clothing • Do not contaminate food or feed products

PRECAUCIÓN

AL USUARIO: Si usted no puede leer o no entiende lo que aparece en el etiquetado, no use este producto hasta que la etiqueta le haya sido explicada por un profesional.
(TO THE USER: If you cannot read or do not understand this product until the label has been fully explained to you by a professional.

IN CASE OF AN EMERGENCY ENDANGERING LIFE OR PROPERTY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT, AEE A CODE 800 424 9300.

STATEMENT OF PRACTICAL TREATMENT

If swallowed: Call a physician or poison control center immediately. Do not induce vomiting by pumping or other means. Do not eat or drink anything until told to do so by a physician. Do not induce vomiting or give anything by mouth. Do not take any other action.

If inhaled: Remove victim to fresh air immediately.

If on skin: Remove contaminated clothing and wash thoroughly with soap and water.

If in eyes: Flush with water for at least 15 minutes; get medical attention.

NOTE TO PHYSICIAN This material is a clinical tool for use in the office setting only. An opinion, an order to

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EPA Req. No.: 4787-8

Product of Denmark

EPA Est. No.: 4787-DN-1

A S CHEMINOVA - Lemvig - Denmark

Phone: (07) 83 41 00 - Telex: 66514 - Telecopy (07) 83 45 55

Net weight: 250 Kilos

PRECAUTIONARY STATEMENTS

Hazard to Humans 18 Domestic Animals

Avoid contact with skin. Wash thoroughly after handling of a product in its original clothing. (Some containers also contain food products.)

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Keep out of lakes, streams, ponds, fish hatcheries, and estuaries. Do not apply where runoff may occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment or disposal of washwaters. shrimp and crab may be killed at application rates recommended on this label. Do not apply where there are important resources. Apply this product only as specified on this label.

PHYSICAL OR CHEMICAL HAZARDS

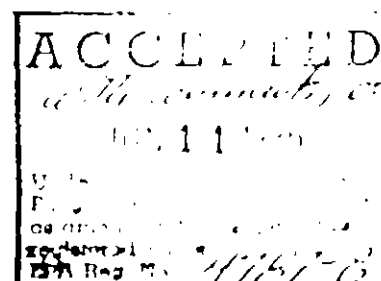
Not so many of the functions considered in this paper for the properties of the solid and gaseous state, but most of the work is devoted to the behavior of the molecules in the liquid and gaseous state, and in the solid state, and a few other functions.

DISCLAIMER

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(c) If MPCA warrants only that the material, as received, conforms to the chemical description on the label and is reasonably fit for the use thereon described when used in accordance with the directions for use, subject to the risks referred to above;

* YFANON is a registered trade mark of A S Cheminox



Ultra Low Volume Aerial Application where automobiles, trailers, trucks and pleasure boats are present

IMPORTANT NOTICE

TO BE APPLIED ONLY BY TRAINED PERSONNEL OF PUBLIC HEALTH OR SANITATION MOSQUITO ABATEMENT DISTRICTS OR PEST CONTROL OPERATORS

DIRECTIONS FOR USE

Adult Mosquito Control: For control of mosquitoes over a 300 foot swath with nonthermal aerosols, the flow rate of EYFANON ULV must be adjusted to produce droplets of 24 microns or less. The spray volume must be adjusted to produce a flow rate of 1.0 gallon per minute. The wind velocity must be determined by readings made from an anemometer located within the spray swath.

IMPORTANT: The flow rate of EYFANON ULV will be determined by the wind velocity. The air flow used for the ultra low volume application must be the same as indicated below.

FIXED WING AIRCRAFT

1. Aircraft speed must be 100 mph.
2. The aircraft must be flying at a constant altitude.
3. The aircraft must be flying at a constant altitude with the wings level.
4. The aircraft must be flying at a constant altitude with the wings level.
5. The aircraft must be flying at a constant altitude with the wings level.
6. The aircraft must be flying at a constant altitude with the wings level.

HELICOPTER

- Equipment speed must be:
1. Rotary wing aircraft must be flying at a constant altitude with the wings level.
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OPERATING PROCEDURES

6. EYFANON ULV must be prefiltered through a 10 micron filter prior to transfer into helicopter tank. A 50 mesh stainless steel line strainer must be installed in the pump feed line.
7. Entire system, including tank, pump, nozzle and feed lines, to be used only for application of EYFANON ULV.
8. Entire system must be inspected daily to insure that there are no leaks.
9. Sleeve must be removed and cleaned immediately after each use. It wash with hot water and blowing dry from outside in with clean air.

10. Rotating nozzle must be turned on and operating before turning on pump. For shut off, pump must be shut off and lines cleared prior to stopping nozzle rotation.

11. Dosage of EYFANON ULV does not exceed 3 fluid ounces per acre.

12. The spray system must produce droplets of EYFANON 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 an anemometer located within the spray swath.

Ultra Low Volume Application
NONTHERMAL AEROSOLS
Applied by
GROUND EQUIPMENT

IMPORTANT NOTICE

TO BE APPLIED ONLY BY TRAINED PERSONNEL OF PUBLIC HEALTH OR SANITATION MOSQUITO ABATEMENT DISTRICTS OR PEST CONTROL OPERATORS

DIRECTIONS FOR USE

Adult Mosquito Control: For control of mosquitoes over a 300 foot swath with nonthermal aerosols, the flow rate of EYFANON ULV must be adjusted to produce droplets of 24 microns or less.

Vehicle Speed Rate per hour	Flow Rate of EYFANON Fluid Ounces per Minute	Maximum Flow Rate per Hour
5	1.0	1 gallon
10	2.0	2 gallons

Adult Stable Fly Control: For control of stable flies over a 300 foot swath with nonthermal aerosols, the flow rate of EYFANON ULV must be adjusted to produce droplets of 24 microns or less.

Vehicle Speed Rate per hour	Flow Rate of EYFANON Fluid Ounces per Minute	Maximum Flow Rate per Hour
5	1.0	1 gallon
10	2.0	2 gallons

DROPLET SIZE

1. The Mass Median Diameter (MMD) of the spray must not exceed 12 microns. The MMD is the diameter of the droplet which divides the spray volume into two equal parts. The MMD can be determined by readings made from an anemometer located within the spray swath.
2. Spray droplets should be adjusted to produce a spray volume of 1.0 gallon per minute. The MMD must be adjusted to produce a spray volume of 1.0 gallon per minute. The MMD must be adjusted to produce a spray volume of 1.0 gallon per minute.
3. The MMD must be adjusted to produce a spray volume of 1.0 gallon per minute. The MMD must be adjusted to produce a spray volume of 1.0 gallon per minute.
4. A minimum of two (2) spray applications must be made over a 300 foot swath.

OPERATING EQUIPMENT

Each Nonthermal Aerosol Generator used for dispersal of EYFANON ULV to control adult mosquitoes must have the 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

IMPORTANT: Inquiries should be made of the nearest Federal Bureau of Investigation office or the nearest office of the Department of Justice, Bureau of Prisons, for information regarding the release of prisoners held in the Federal Penitentiary System.

100 for use of the system with the new communication system. Factors affecting the system's performance are the quality of the data and the quality of the communication system. The system is designed to be used for the purpose of the system's performance.