calibrated; and to determine that the pressure recommended by the manufacturer is being maintained.

Flow Rate - must be regulated by accurate flow meter.
- 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
- upward at an angle of 45° or more.

Vehicle Speed - *not greater than 20 miles per hour.*
- shut off spray equipment when vehicle is stopped

IMPORTANT - Spray droplets of undiluted FYFANON ULV will permanently damage automobile paint unless all the conditions described and recommended in this leaflet are met.

Directions for Determining the droplet size of FYFANON ULV nonthermal aerosols

Permanent records of each droplet size determination must be kept and made avaiable to CHEMINOVA, upon request.

I. Preparation of Slides with DRI-FILM®

FYFANON 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" x 1" 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.

II. Depositium of FYFANON 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 FYFANON 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 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 a sufficient height to obtain a representative sample of the aerosol.

III. Determination of FYFANON 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 divisions 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 the amount of spread that occurred on the slides. The FYFANON 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 persent 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.

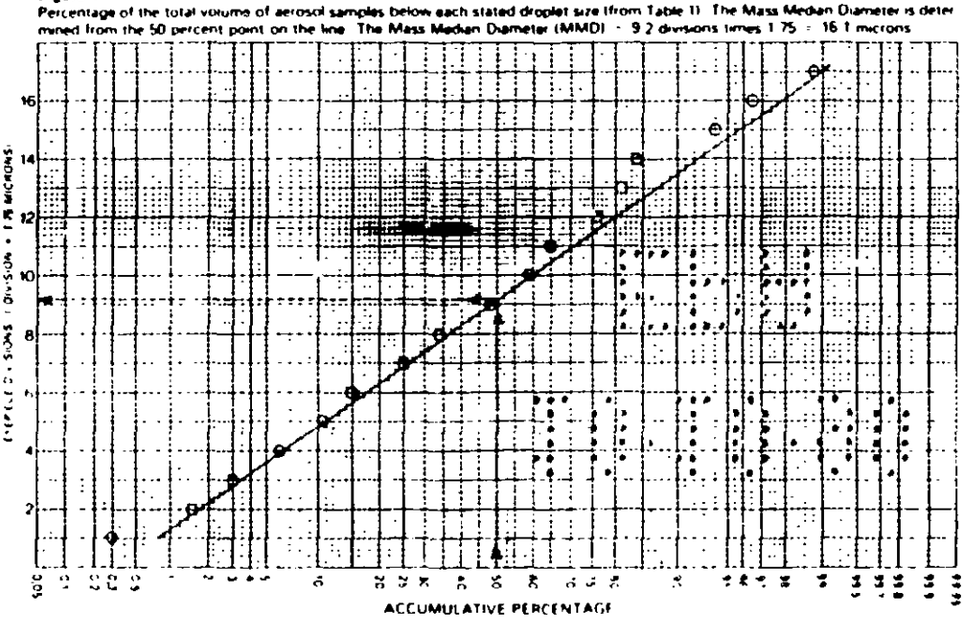
Table 1 - Representative Count of FYFANON ULV Aerosol Droplets impinged on Microscope Slides Coated with DRIFILM®

Eyepiece Divisions (D)*	Number of Droplets (N)	DXN	% of Total DXN ∑(DXN)	Accumulative Percentages
1	5	5	0.31	0.31
2	10	20	1.22	1.53
3	9	27	1.66	3.18
4	12	48	2.93	6.11
5	15	75	4.58	10.69
6	12	72	4.40	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	1636		

*Measurements were taken at 400x magnification. Each eyepiece division equals 1.75 microns (3.5 microns times 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
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.



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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NOV 02 1990

Mr. Clyde L. Cline
Sunniland Corporation
P.O. Box 1697
Sanford, FL 32771-1697

Dear Mr. Cline:

Subject: Sunniland Rose-Flower and Ornamental Insect Spray
EPA Registration No. 9404-63
Your Submission Dated August 21, 1989

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records.

Sincerely yours,

Phil Hutton
Product Manager (17)
Insecticide-Rodenticide Branch
Registration Division (H7505C)

Enclosure

57653:I:A-4:Hollis:C.Disk:KENCO:09/18/90:de:vo:ek:de

CONCURRENCES								
SYMBOL								
SURNAME								
DATE								

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