

70644-2

05/12/2000

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U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Biopesticides and Pollution Prevention Division (7501W)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg.  
Number

70644-2

Date of Issuance:

MAY 12 2000

Term of Issuance

Unconditional

Name of Pesticide Product

Nutrol LC™

NOTICE OF PESTICIDE:

- Registration
- Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

LidoChem, Inc.  
20 Village Court  
Hazlet, NJ 07730

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others

This product is unconditionally registered in accordance with FIFRA sec. 3(c)(5) subject to the comments listed below:

1. Make the following label changes:
  - a. Add the phrase, "EPA Registration No. 70644-2 to your label before you release the product for shipment
  - b. Add the appropriate Establishment Number to your label before you release the product for shipment
2. Submit five copies of the final printed labeling before you release this product for shipment.

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.

Unconditional registration does not eliminate the need for continual reassessment of a pesticide. If EPA determines, at any time, that additional data are required to maintain in effect, an existing registration, the Agency will require submission of such data under Section 3(c)(2)(B) of FIFRA.

Signature of the Approving Official

5-11-2000

**SEE BACK PANEL FOR ADDITIONAL APPLICATION GUIDELINES.**  
**CROP PROTECTION WITH NUTROL™LC**

**SEE ADDITIONAL PRECAUTIONARY STATEMENTS**

Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicada ampliamente.

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**If swallowed:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious do not give anything by mouth and do not induce vomiting. **If in Eyes:** Flush eyes with plenty of water. Call a physician if irritation persists. **If on Skin:** Wash with plenty of soap and water. Get medical attention if irritation persists. **If inhaled:** Remove victim to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. Get medical attention.

Applicators and other handlers must wear a long-sleeved shirt, long pants, and shoes plus socks.

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Change into clean clothing.

Do not contaminate water when disposing of equipment wash waters. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high watermark.

**Directions For Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers (long sleeved shirt, long pants, shoes and socks) may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

**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 instruction 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 enter or allow worker entry into treated areas during the restricted entry interval (REI) of four (4) 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, shoes and socks.

**Storage and Disposal**

**Storage:** Store product in original container away from children and domestic animals. Do not contaminate water, food or feed by storage or disposal. **Product Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container Disposal:** Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill via industry supported recycling programs. Incineration is not recommended.

See Side/Back Panel for Additional Precautionary Statements

**Crop Protection with NUTROL™LC**

NUTROL™LC is a liquid product to be diluted in water. Application rates vary according to the specific volumes of water applied to the crop. Spray volumes below 100 gal/acre may be used as long as the crop can be completely covered with the spray solution. Surfactant use and sprayer efficiency can impact coverage. Select a water volume and corresponding rate of NUTROL™LC necessary to thoroughly spray/mist all fruit and foliage surfaces. Add an approved/compatible spreader/sticker to the solution to assure complete spray coverage of plant surfaces. Plant disease pressure can increase when plant surfaces are frequently wet and temperatures are warm. Under these adverse conditions use the higher recommended application rates and apply at shorter spray intervals.

LidoChem's NUTROL™LC suppresses existing mildew disease and inhibits further development of new mildew growth on plant tissue. It can be used alone, in alternating applications or in tank-mix spray programs with other compatible, EPA approved fungicides. It is rapidly absorbed by the plant and is mobile within the plant tissues, improving the potassium and phosphorous content in the plant. It therefore acts in a dual role as a biocompatible fungicide for plant disease control and also as an essential plant food.

Best performance is attained by beginning NUTROL™LC applications prior to the onset of disease, as a preventative disease control program. The active ingredient, potassium dihydrogen phosphate, when applied as directed to all crops and in accordance with good agricultural practices, is exempt from the requirement of residual tolerance as referenced in 40 CFR 180.1001 and 180.1193.

**IMPORTANT**

**Resistant Powdery Mildew Fungus Strains May Be Present!**

If treatment of conventional fungicides such as benzimidazole, thiophanate, or DMJ type are not effective, resistant strains of powdery mildew may be present. Under such conditions NUTROL™LC may be applied more frequently or in additional tank mixes as a "resistance management" tool. NUTROL™LC controls powdery mildew strains that may be resistant to other fungicides. Additionally, applicators should consider the use of other chemistries, such as strobilurins, that are less likely to have resistance issues. Alternation of NUTROL™LC with strobilurin fungicides has been the most effective treatment in many research programs. Best performance is achieved by beginning NUTROL™LC applications prior to the onset of disease, as a preventative control measure and then alternating with other fungicides.

**CROP PROTECTION WITH NUTROL™LC gal/Acre**

Crop	Water Volume gal / acre					Crop	Water Volume gal / acre				
	50	100	150	200	250		50	100	150	200	250
Apples	2.0	2.0-4.0	4.25-5.0	5.25-8.0	8.25-10.0	Peppers	2.0	2.0-4.0	4.25-5.0	5.0	5.0
Cucurbits	2.5	2.5-5.0	4.25-5.0	5.0	5.0	Roses	1.25	1.5-2	1.5-2.0	2.5	2.5
Grapes	2.0	2.0-4.0	4.25-5.0	5.25-8.0	8.25-10.0	Stone Fruits	2.0	2.0-4.0	2.0-4.0	5.0	5.0
Mangoes	2.0	2.0-4.0	4.25-5.0	5.25-8.0	11.0	Tomatoes	2.0	2.0-4.0	2.0-4.0	5.0	5.0
Ornamentals	2.0	2.0-4.0	4.25-5.0	5.25-8.0	8.25-10.0	Turf	2.0	2.0-4.0	4.25-8.0	5.25-8.0	8.25-10.0

Conditions of Sale

# 0-18-20

Net Weight 29 Pounds  
 EPA REG. NO. 70644-1  
 EPA EST. NO. 70644-NJ-1  
 EPA EST. NO. 67536-FL-001  
 EPA EST. NO. 14372-NY-1  
 EPA EST. NO. 2935-CA-1  
 EPA EST. NO. 66196-CA-1

**Guaranteed Analysis:** Available Phosphate (P<sub>2</sub>O<sub>5</sub>).....18 %  
 Soluble Potash (K<sub>2</sub>O).....20 %  
 Specific Gravity.....1.394 (11.63 lbs/gal)

Derived from Potassium Dihydrogen Phosphate and Potassium Hydroxide

**Product Description**

NUTROL™LC is a low salt index biocompatible fungicide and plant nutrient for foliar application. Its suggested use is as a supplement to a grower's standard fungicide and fertilizer program. Trials clearly document the ability to improve yield and quality via control of powdery mildew as well as through increased nutrient levels as supplied by NUTROL™LC.

Research has indicated that foliar applied phosphorous and potassium in pure and highly soluble forms, as supplied by NUTROL™LC, are absorbed more efficiently than soil applied nutrients. Nutrient translocation to all parts of the plant is generally more rapid when nutrients are applied via foliar application.

A good tissue testing program may be helpful to monitor and maintain optimum plant growth and development. Adverse conditions such as moisture, stress, weather, salts, soil type, etc., may induce nutrient deficiency symptoms. NUTROL™LC application is a means of obtaining a quick response to needed nutrients when applied as directed.

**Mixing Directions**

When applying NUTROL™LC as a powdery mildew fungicide, specifically follow the mixing rates outlined in the "CROP PROTECTIONS WITH NUTROL™LC on/Acre" chart as well as the "NUTROL™LC Crop Protection Fungicide Application Guidelines" sections.

When applying as a nutrient only, follow the "NUTROL™LC guidelines for Nutritional Application" section. Apply directed volume of NUTROL™LC in a sufficient volume of water necessary to fully cover all foliage and/or fruit surfaces.

**Application Precautions**  
 WARNING: Do not apply under poor drying conditions, or with materials that may cause russeting. Apply with a minimum 7 day spray interval. Do not apply to crops under severe stress conditions. Applications should begin as stress factors subside. With rising temperatures (A) stop spraying at 85°F. With fall temperatures (PM) start spraying at 80°F. For crops with large canopies use adequate gallons per acre to ensure full coverage to the point of run-off.

**Compatibility**  
 NUTROL™LC is compatible with most pesticides and can be applied in alternating or tank mix spray programs. Always test tank mixes for compatibility, via a jar test, before mixing large batches. DO NOT mix with unchelated minor elements.

**NUTROL™LC Guidelines for Nutritional Application**

CROP	RATE	TIMING
<b>Deciduous Fruit:</b> Including but not limited to: Apples, Pears, Cherries, Prunes, Apricots, Peaches, Plums and Nectarines.	Foliar: 1.25-4.0 gal/Acre per application.	Pre and Post Bloom, Mid-Season (7-14 day interval), Finish spray at color break.
<b>Nuts:</b> Including but not limited to: Almonds, Pistachios, Walnuts, Pecans and Filberts.	Foliar: 1.25-2.5 gal/Acre per application.	Bloom, Mid-Season (7-14 day interval), Finish *Almonds begin at petal fall and continue through full split at 30 day interval.
<b>Citrus:</b> Including but limited to: Oranges, Lemons, Grapefruit, Tangerines and Limes.	Foliar: 4.0-6.0 gal/Acre per application.	Pre and post Bloom, (1-3 applications), Mid-Season (7-14 day interval). After June Drop and again in September.
<b>Grapes:</b> Including but not limited to: Wine, Table and Raisin Grapes.	Foliar: 1.0-2.5 gal/Acre per application.	Pre and Post Bloom (2-4 applications Starting 14 days prior to full bloom), Mid-Season (7-14 day interval), Finish spray 2 applications. Beginning 30 days before harvest for sugar production.
<b>FIELD CROPS</b>		
<b>Alfalfa and Clover</b>	Foliar: 1.0-2.0 gal/Acre per application.	Apply to alfalfa at 6" to 8" stages. Reapply after each regrowth.
<b>Beans:</b> Including but not limited to Dry, Succulent and Lima.	Foliar: 1.25-2.5 gal/Acre per application.	Apply from bud set to early bloom when sufficient leaf area is available for foliar uptake. Additional applications at main pod filling.
<b>Root Crops:</b> Including but not limited to Carrots, Beets and Sweet Potatoes.	Foliar: 1.25-2.5 gal/Acre per application.	Apply at 14 day intervals from root swell through early harvest.
<b>Potatoes</b>	Foliar: 1.25-2.5 gal/Acre per application.	Apply at early initial tuber formation. Additional applications can be made in conjunction with pesticide applications.
<b>Onions and Garlic</b>	Foliar: 1.25-2.5 gal/Acre per application.	Transplants: Apply as a starter and again 14 days later. Additional applications starting at bulb swell (14 day interval).
<b>Sugar Beets</b>	Foliar: 1.25-2.5 gal/Acre per application.	Apply when leaves are 10" across. Repeat 3-4 weeks later and again 4 weeks before harvest.
<b>Corn (Field and Sweet)</b>	Foliar: 1.25-2.5 gal/Acre per application.	Apply at tassel, early silk and ear filling.
<b>Cotton</b>	Foliar: 1.25-2.5 gal/Acre per application.	Apply at squaring, first flower and at boll set.
<b>Hops</b>	Foliar: 1.25-2.5 gal/Acre per application.	Begin at early season training and continue through end of bloom period as often as 7 day intervals.
<b>Legumes:</b> Including but not limited to Peas (dry and succulent), Lentils and Garbanzos.	Foliar: 1.0-2.0 gal/Acre per application.	Apply when leaves are large enough to absorb foliar nutrients. Continue through bloom and repeat during pod filling.
<b>Mint</b>	Foliar: 1.0-2.5 gal/Acre per application.	Begin applications at 6"-8" growth and repeat as often as every 7 days.
<b>Small grains:</b> Including but not limited to Wheat, Oats and Barley.	Foliar: 1.0-2.0 gal/Acre per application.	Apply at tillering and before early boot stage.
<b>VEGETABLES AND OTHERS</b>		
<b>Avocado</b>	Foliar: 5.0-8.0 gal/Acre per application.	Apply 2-3 times starting just prior to fruit set. (30 day interval)
<b>Banana</b>	Foliar: 5.0-7.0 gal/Acre per application.	Apply 1-2 times at 15 and 21 days after shooting. Additional application at 21-30 days after shooting. Apply on time 21-30 before bloom.
<b>Berries:</b> Bush Type	Foliar: 1.25-2.5 gal/Acre per application.	2-4 Applications starting at first flower and continuing at 14-21 day intervals.
<b>Cucurbit and Melons:</b> Including but not limited to Cantaloupe, Honeydew, Musk, Melon, Cucumber, Pumpkin and Squash.	Foliar: 1.25-2.5 gal/Acre per application.	Multiple applications beginning at bloom or just prior to fruit set and continue until harvest. (7-14 day intervals).
<b>Mango</b>	Foliar: 3.0-5.0 gal/Acre per application.	Apply 3 times starting after Panicle development, then 14 and 28 days later.
<b>Peanuts</b>	Foliar: 1.25-2.0 gal/Acre per application.	3 Applications: 1 at early bloom, then at 80 days and 90 days after planting.
<b>Produce:</b> Including but not limited to: Iceberg Lettuce, Celery, Cole, and Crops.	Foliar: 0.5-1.0 gal/Acre per application.	Multiple low rate applications starting just after transplanting or after thinning. (7-14 day interval). Also apply 7-Crops prior to harvest to improve color and quality.
<b>Rice</b>	Foliar: 1.0-2.0 gal/Acre per application.	Apply twice at the end of tillering and again at Panicle initiation.
<b>Soybeans</b>	Foliar: 1.25-2.5 gal/Acre per application.	2 Applications: Apply at bloom stage and again at the main pod filling.
<b>Strawberries</b>	Foliar: 1.25-2.5 gal/Acre per application.	Multiple applications throughout the season starting just prior to first bloom and following each picking. (7-14 day interval). Can be applied via fertigation.
<b>Tomatoes and Peppers</b>	Foliar: 1.25-2.5 gal/Acre per application.	Apply at transplanting. Make additional applications (1-3) beginning at first bloom (14 day interval). Additional sprays at 21 and 10 days before harvest.
<b>TURF:</b> Cool Season Grass: Including but not limited to Bentgrass, Fescue and Bluegrass.	Foliar: 5.0-8.0 oz/1000 sq. ft.	Use throughout the growing season to encourage strong roots and tolerance to heat, drought and disease stress. Also apply during over-seeding. (7-14 day interval).

**NUTROL™LC Crop Protection Fungicide Application Guidelines**

<p><b>APPLES</b></p> <p>For control of powdery mildew (<i>Podosphaera tinctoria</i>) on Apples use 2.0 to 10.0 gal/Acre of NUTROL™LC. Start spraying at light cluster and continue spraying every 7 to 10 days until terminal shoots cease their vegetative growth. The rate of product per acre will vary depending upon the tree size (canopy development) and the volume of water.</p> <p>Min: 2.0 gal/acre applied in a total of 50 gal/acre of spray solution.                  Max: 10.0 gal/acre applied in a total of 250 gal/acre of spray solution.                  * See Table for specific rates per volume of water.</p>	<p><b>PEPPERS</b></p> <p>For control of powdery mildew (<i>Leveillula taurica</i>) on Peppers.</p> <p><b>Greenhouse Grown:</b> Mix 2.5 gallons per 100 gallons of total spray solution and apply 1.5 gallons of mix per 1,000 sq. ft. at 5 to 7 day intervals. The use of shading is suggested to reduce temperatures during spraying.</p> <p><b>Field Grown:</b> Use 2.0 to 5.0 gal/acre of NUTROL™LC when disease pressure begins to increase. Repeat at 7 to 10 day intervals.</p> <p>Min: 2.0 gal/acre applied in a total of 50 gal/acre of spray solution.                  Max: 2.5 gal/acre applied in a total of 250 gal/acre of spray solution.                  * See Table for specific rates per volume of water.</p>
<p><b>CUCURBITS (CUCUMBER, MELONS, SQUASH, WATERMELONS)</b></p> <p>For control of powdery mildew (<i>Sphaerotheca fuliginea</i>) on the above listed cucurbits use 2.5 to 5.0 gal/Acre of NUTROL™LC. Start spraying when plants begin to run or when disease pressure is anticipated. Repeat at 7 to 14 day intervals as needed. Under conditions of severe disease pressure, use the higher rate and apply at 7 day intervals. For best results, avoid application when temperatures are over 85°F and humidity is high. For greenhouse use, shading may be required.</p> <p>Min: 2.5 gal/acre applied in a total of 50 gal/acre of spray solution.                  Max: 5.0 gal/acre applied in a total of 250 gal/acre of spray solution.                  * See Table for specific rates per volume of water.</p>	<p><b>ROSES</b></p> <p>For control of powdery mildew (<i>Sphaerotheca pannosa var. rosae</i>), use 1.25 to 2.5 gal/acre of NUTROL™LC per acre. Apply at 5 to 7 day intervals as needed. Best performance can be achieved with full wetting of leaves without runoff.</p> <p>Min: 1.25 gal/acre applied in a total of 50 gal/acre of spray solution.                  Max: 2.5 gal/acre applied in a total of 250 gal/acre of spray solution.                  * See Table for specific rates per volume of water.</p>
<p><b>GRAPES</b></p> <p>For control of powdery mildew (<i>Uncinula necator</i>) on grapes use 2.0 to 10.0 gal/acre of NUTROL™LC. Start spraying in the spring when shoots are 3 to 5 inches in length and when disease pressure is anticipated. Repeat every 10 to 14 days. The low per acre rates are intended for early in the season when disease pressure is low. The per acre rate should be increased as disease pressure increases. For improved appearance on table grapes, use lower application rates.</p> <p>Min: 2.0 gal/acre applied in a total of 50 gal/acre of spray solution.                  Max: 10.0 gal/acre applied in a total of 250 gal/acre of spray solution.                  * See Table for specific rates per volume of water.</p>	<p><b>STONE FRUITS (PEACHES, NECTARINES, PLUMS, CHERRIES)</b></p> <p>For control of powdery mildew (<i>Sphaerotheca pannosa var. persicae</i> and <i>Podosphaera pyracanthae</i>) on stone fruits as listed use 2.0 to 5.0 gal/acre of NUTROL™LC. Follow local recommendations for powdery mildew control timings or apply when disease pressure is anticipated and repeat every 7 to 14 days.</p> <p>Min: 2.0 gal/acre applied in a total of 50 gal/acre of spray solution.                  Max: 5.0 gal/acre applied in a total of 250 gal/acre of spray solution.                  * See Table for specific rates per volume.</p>
<p><b>MANGOES</b></p> <p>For control of powdery mildew (<i>Oidium mangiferae</i>) on mango use 2.0 to 11.0 gal/acre of NUTROL™LC. Start spraying at first appearance of bloom panicles (approximately 2 inches long) and repeat at 7 to 14 day intervals until all fruit are set. Additional sprays, are required, a minimum of 2 to 3 week intervals until shoot growth ceases, which should be about 6 sprays.</p> <p>Min: 2.0 gal/acre applied in a total of 50 gal/acre of spray solution.                  Max: 11.0 gal/acre applied in a total of 250 gal/acre of spray solution.                  * See Table for specific rates per volume of water.</p>	<p><b>TOMATOES</b></p> <p>For control of powdery mildew (<i>Leveillula taurica</i>) on Tomatoes: Greenhouse Grown: Mix 2.5 gallons per 100 gallons of total spray solution and apply 1.5 gallons of mix per 1000 sq. ft. at 5 to 7 day intervals. The use of shading is suggested to reduce temperatures during spraying.</p> <p><b>Field Grown:</b> Use 2.0 to 5.0 gal/acre of NUTROL™LC when disease pressure begins to increase. Repeat at 7 to 10 day intervals.</p> <p>Min: 2.0 gal/acre applied in a total of 50 gal/acre of spray solution.                  Max: 5.0 gal/acre applied in a total of 250 gal/acre of spray solution.                  * See Table for specific rates per volume of water.</p>

ORNAMENTALS