CICLOPIROX OLAMINE- ciclopirox olamine cream
E. FOUGERA & CO. A division of Fougera Pharmaceuticals Inc.

CICLOPIROX CREAM 0.77%
(Ciclopirox Olamine Cream USP)

Rx only

FOR DERMATOLOGIC USE ONLY

NOT FOR OPHTHALMIC USE

DESCRIPTION

Ciclopirox Cream 0.77% is for topical use.

Each gram of Ciclopirox cream 0.77% contains 7.70 mg of Ciclopirox

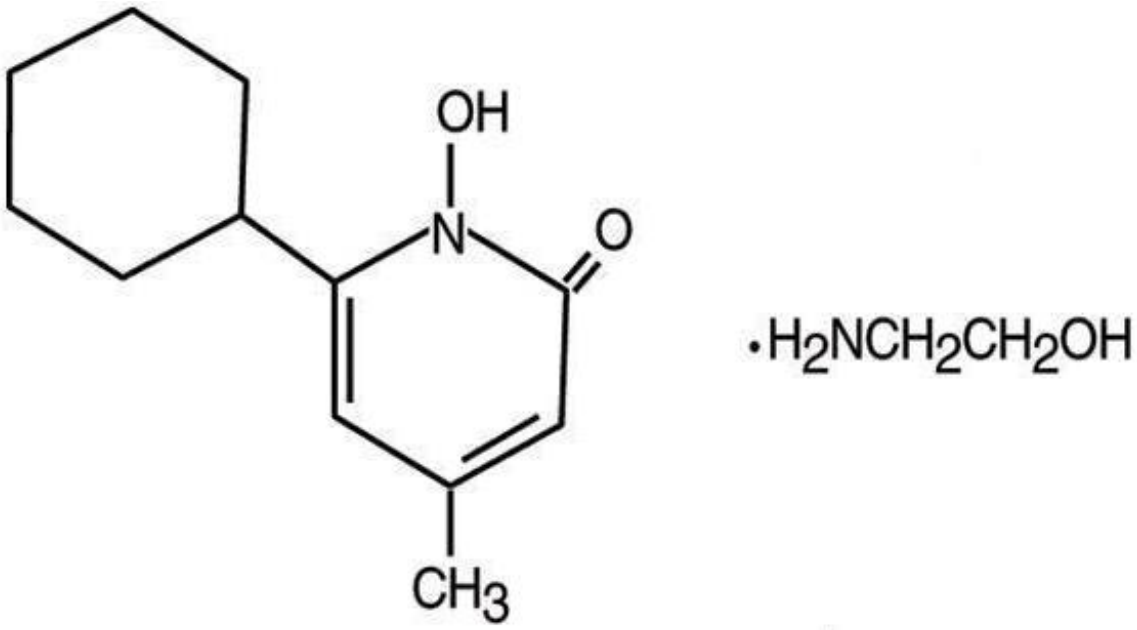
(as Ciclopirox Olamine) in a water miscible vanishing cream base consisting of purified water USP, cetyl alcohol NF, mineral oil USP, octyldodecanol NF, stearyl alcohol NF, cocamide DEA, polysorbate 60 NF, myristyl alcohol, sorbitan monostearate NF, lactic acid USP, and benzyl alcohol NF (1%) as preservative.

Ciclopirox Cream contains a synthetic, broad-spectrum, antifungal agent ciclopirox (as ciclopirox olamine).

The chemical name is 6-cyclohexyl-1-hydroxy-4-methyl-2(1*H*)-pyridone, 2-aminoethanol salt.

The CAS Registry Number is 41621-49-2.

The chemical structure is:



Ciclopirox Cream has a pH of 7.

CLINICAL PHARMACOLOGY

Ciclopirox is a broad-spectrum, antifungal agent that inhibits the growth of pathogenic dermatophytes,

yeasts, and *Malassezia furfur*. Ciclopirox exhibits fungicidal activity *in vitro* against isolates of *Trichophyton rubrum, Trichophyton mentagrophytes, Epidermophyton floccosum, Microsporum canis,* and *Candida albicans.*

Pharmacokinetic studies in men with tagged ciclopirox solution in polyethylene glycol 400 showed an average of 1.3% absorption of the dose when it was applied topically to 750 cm^2 on the back followed by occlusion for 6 hours. The biological half-life was 1.7 hours and excretion occurred via the kidney. Two days after application only 0.01% of the dose applied could be found in the urine. Fecal excretion was negligible.

Penetration studies in human cadaverous skin from the back, with ciclopirox cream 0.77% with tagged ciclopirox showed the presence of 0.8 to 1.6% of the dose in the stratum corneum 1.5 to 6 hours after application. The levels in the dermis were still 10 to 15 times above the minimum inhibitory concentrations.

Autoradiographic studies with human cadaverous skin showed that ciclopirox penetrates into the hair and through the epidermis and hair follicles into the sebaceous glands and dermis, while a portion of the drug remains in the stratum corneum.

Draize Human Sensitization Assay, 21-Day Cumulative Irritancy study, Phototoxicity study, and Phot-Draize study conducted in a total of 142 healthy male subjects showed no contact sensitization of the delayed hypersensitivity type, no irritation, no phototoxicity, and no photo-contact sensitization due to Ciclopirox Cream 0.77%.

INDICATIONS AND USAGE

Ciclopirox Cream is indicated for the topical treatment of the following dermal infections: tinea pedis, tinea cruris, and tinea corporis due to *Trichophyton rubrum, Trichophyton mentagrophytes, Epidermophyton floccosum,* and *Microsporum canis*; candidiasis (moniliasis) due to *Candida albicans*; and tinea (pityriasis) versicolor due to *Malassezia furfur*.

CONTRAINDICATIONS

Ciclopirox Cream is contraindicated in individuals who have shown hypersensitivity to any of its components.

WARNINGS

Ciclopirox Cream is not for ophthalmic use. **Keep out of reach of children.**

PRECAUTIONS

If a reaction suggesting sensitivity or chemical irritation should occur with the use of Ciclopirox Cream, treatment should be discontinued and appropriate therapy instituted.

Information for Patients

The patient should be told to:

1. Use the medication for the full treatment time even though symptoms may have improved and notify the physician if there is no improvement after four weeks.
2. Inform the physician if the area of application shows signs of increased irritation (redness, itching, burning, blistering, swelling, or oozing) indicative of possible sensitization.
3. Avoid the use of occlusive wrappings or dressings.

Carcinogenesis, Mutagenesis, Impairment of Fertility: A carcinogenicity study in female mice dosed cutaneously twice per week for 50 weeks followed by a 6-month drug-free observation period

prior to necropsy revealed no evidence of tumors at the application site. The following *in vitro* and *in vivo* genotoxicity tests have been conducted with ciclopirox olamine: studies to evaluate gene mutation in the Ames *SalmonellaI*Mammalian Microsome Assay (negative) and Yeast Saccharomyces Cerevisiae Assay (negative) and studies to evaluate chromosome aberrations *in vivo* in the Mouse Dominant Lethal Assay and in the Mouse Micronucleus Assay at 500 mg/kg (negative). The following battery of *in vitro* genotoxicity tests were conducted with ciclopirox: a chromosome aberration assay in V79 Chinese Hamster Cells, with and without metabolic activation (positive); a gene mutation assay in the HGPRT - test with V79 Chinese Hamster Cells (negative); and a primary DNA damage assay (i.e., unscheduled DNA Synthesis Assay in A549 Human Cells (negative)). An *in vitro* Cell Transformation Assay in BALB/C3T3 Cells was negative for cell transformation. In an *in vivo* Chinese Hamster Bone Marrow Cytogenetic Assay, ciclopirox was negative for chromosome aberrations at 5000 mg/kg.

Pregnancy Category B. Reproduction studies have been performed in the mouse, rat, rabbit, and monkey (via various routes of administration) at doses 10 times or more the topical human dose and have revealed no significant evidence of impaired fertility or harm to the fetus due to ciclopirox. There are, however, no adequate or well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Ciclopirox Cream 0.77% is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in pediatric patients below the age of 10 years have not been established.

ADVERSE REACTIONS

In all controlled clinical studies with 514 patients using Ciclopirox Cream and in 296 patients using the vehicle cream, the incidence of adverse reactions was low. This included pruritus at the site of application in one patient and worsening of the clinical signs and symptoms in another patient using ciclopirox cream and burning in one patient and worsening of the clinical signs and symptoms in another patient using the vehicle cream.

DOSAGE AND ADMINISTRATION

Gently massage Ciclopirox Cream 0.77% into the affected and surrounding skin areas twice daily, in the morning and evening. Clinical improvement with relief of pruritus and other symptoms usually occurs within the first week of treatment. If a patient shows no clinical improvement after four weeks of treatment with Ciclopirox Cream the diagnosis should be redetermined. Patients with tinea versicolor usually exhibit clinical and mycological clearing after two weeks of treatment.

HOW SUPPLIED

Ciclopirox Cream 0.77% (Ciclopirox Olamine Cream USP) is supplied in:

NDC 0168-0313-15 15 gram tube

NDC 0168-0313-30 30 gram tube

NDC 0168-0313-90 90 gram tube

Store at 20°-25°C (68°-77°F). [see USP Controlled Room Temperature]

E. FOUGERA & CO.
A division of
Fougera

PHARMACEUTICALS INC.
Melville, New York 11747

I2313B
R11/11
#99

PACKAGE LABEL – PRINCIPAL DISPLAY PANEL – 15 G CONTAINER

NDC 0168-0313-15

FOUGERA®

CICLOPIROX CREAM 0.77%

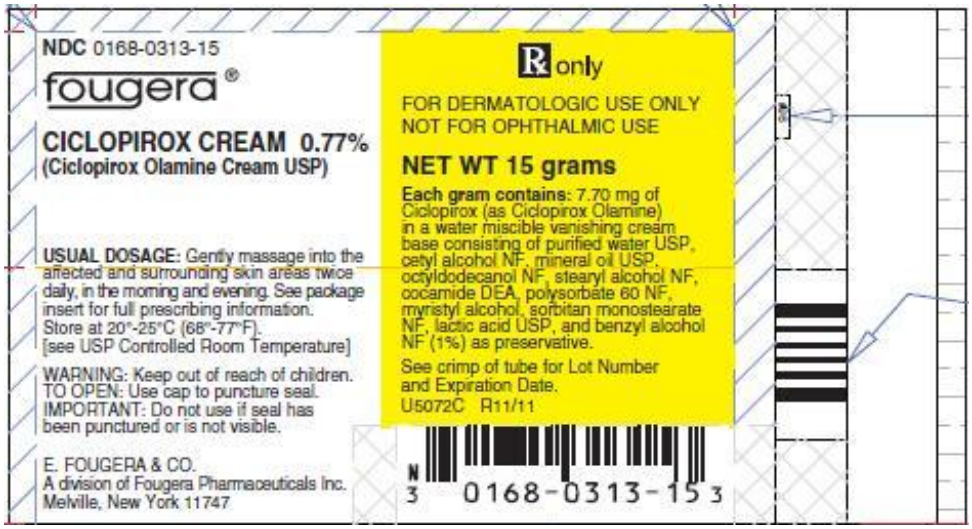
Ciclopirox Olamine Cream USP)

Rx only

FOR DERMATOLOGIC USE ONLY

NOT FOR OPHTHALMIC USE

NET WT 15 grams



PACKAGE LABEL – PRINCIPAL DISPLAY PANEL – 15 G CARTON

NDC 0168-0313-15

Rx only

FOUGERA®

CICLOPIROX CREAM 0.77%

Ciclopirox Olamine Cream USP)

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WARNING: Keep out of reach

of children.

NET WT 15 grams

CICLOPIROX OLAMINE

ciclopirox olamine cream

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:0168-0313
Route of Administration	TOPICAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
CICLOPIROX OLAMINE (UNII: 50MD4SB4AP) (CICLOPIROX - UNII:19W019ZDRJ)	CICLOPIROX	7.7 mg in 1 g

Inactive Ingredients	
Ingredient Name	**Strength**
water (UNII: 059QF0KO0R)	
cetyl alcohol (UNII: 936JST6JCN)	
mineral oil (UNII: T5L8T28FGP)	
octyldodecanol (UNII: 461N1O614Y)	
stearyl alcohol (UNII: 2KR89I4H1Y)	
coco diethanolamide (UNII: 92005F972D)	
polysorbate 60 (UNII: CAL22UVI4M)	
myristyl alcohol (UNII: V42034O9PU)	
sorbitan monostearate (UNII: NVZ4I0H58X)	
lactic acid (UNII: 33X04XA5AT)	
benzyl alcohol (UNII: LKG8494WBH)	

Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:0168-0313-15	1 in 1 CARTON		
1		15 g in 1 TUBE		
2	NDC:0168-0313-30	1 in 1 CARTON		
2		30 g in 1 TUBE		
3	NDC:0168-0313-90	1 in 1 CARTON		
3		90 g in 1 TUBE		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA076435	12/29/2004	

Labeler - E. FOUGERA & CO. A division of Fougera Pharmaceuticals Inc. (043838424)

Revised: 2/2013 E. FOUGERA & CO. A division of Fougera Pharmaceuticals Inc.