

# TECHNICAL SHEET



HUMCO Compounding  
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## HUMCO™ RECURA™ ANTI-FUNGAL TOPICAL CREAM

### 1. General Information

Humco's RECURA™ Anti-fungal topical cream is an innovative compounding delivery vehicle for creams compounded to treat dermal and onychomal fungal infections. RECURA™ contains ingredients that allow anti-fungal active ingredients to be carried across keratinized nail and skin tissue to be delivered to the infective dermatophyte. It has been intensively studied, patented, and the literature peer-reviewed in order to validate claims that the cream is compatible with a number of anti-fungal active ingredients.

### 2. Characteristics

RECURA™ Anti-Fungal Topical Cream Physical Properties	
pH	7.0 - 9.0
Physical Form	Opaque Gray/Purple Viscous Cream
Transdermal/Transungual Penetration	Excellent
API Compatibility	Many Antifungal API's

### 3. Composition

Purified water, propylene glycol, alcohol, magnesium aluminum silicate, camphor, menthol, hydroxypropylcellulose, eucalyptus oil, sodium thioglycolate, propylene carbonate, urea, sodium hydroxide, disodium EDTA, tea tree oil, thymol, acetylcysteine, strontium chloride.

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## 4. Features

- Increased penetration ability - Contains penetration enhancers and natural oils to facilitate active ingredient transport across skin and nails
- Drug Compatibility - Both hydrophilic and lipophilic powdered API's can be levigated with alcohol and incorporated into the base
- Compound Diversity - Contains penetrating agents for better nail penetration, natural oils for better skin penetration; the base is alcohol-dispersible for viscosity adjustment

## 5. Examples of Compatible Active Pharmaceutical Ingredients

Clotrimazole	1 – 5 %
Fluconazole	2 – 10 %
Ketoconazole	2 – 10 %
Ibuprofen	1 – 5 %
Itraconazole	2 – 10 %
Miconazole	2 – 10 %

## 6. Applications

- Anti-fungal prescriptions
- Infectious disease
- Onychomycosis

## 7. Typical Formulas

### Transungual Penetration Formula

Miconazole..... 10%  
RECURA™ Anti-fungal .....q.s. 100%

### Transdermal Penetration Formula

Clotrimazole..... 2%  
Ibuprofen ..... 2%  
RECURA™ Anti-fungal .....q.s. 100%

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## 8. General Modus Operandi

- Weigh and measure the API's.
- Add RECURA to unguator jar.
- Add the active ingredients to unguator jar and mix for 5 minutes at 1000 rpm; if desired, pre-disperse the actives with Alcohol or Propylene glycol to form a paste.

## 9. Incompatibilities

- Incompatible with high levels of hydrophilic active pharmaceutical ingredients.

## 10. Proper Use and Storage

For External Use Only

Store in a Cool Dry Place; Protect from freezing; Keep lid securely tightened

## 11. Studies

*90 Days BUD Miconazole 10% in RECURA Anti-fungal Topical Cream.* Final Report; Humco Compounding, Austin, TX.

*90 Days BUD Fluconazole 10% in RECURA Anti-fungal Topical Cream.* Final Report; Humco Compounding, Austin, TX.

*In Vitro* Evaluation of Onychomycosis Treatments for Permeation and Anti-Fungal Efficacy. Protocol 312-1501-01. Medpharm Ltd. Guilford, UK (2015).