



Suggested Formula	Itraconazole 1%, Levofloxacin 2%, Mupirocin 2% Topical Ointment (Suspension, 25 g)	FIN	F 006 359
-------------------	--	-----	-----------

SUGGESTED FORMULATION

Ingredient Listing	Qty.	Unit	NDC #	Supplier	Lot Number	Expiry Date
Itraconazole, USP	0.250	g				
Levofloxacin, USP	0.500	g				
Mupirocin, USP	TBD					
Propylene Glycol, USP	3.0	mL				
Medisca AlpaWash™	TBD					

SPECIAL PREPARATORY CONSIDERATIONS

Ingredient-Specific Information

Light sensitive (protect from light whenever possible):

Itraconazole, Levofloxacin, Propylene Glycol

Hygroscopic (protect from moisture whenever possible):

Propylene Glycol

Suggested Preparatory Guidelines

Non-Sterile Preparation Sterile Preparation

Processing Error /

Testing Considerations:

To account for processing error considerations during preparation, it is suggested to measure an additional **12 to 15%** of the required quantities of ingredients.

Special Instruction:

Protective apparel, such as a lab coat, disposable gloves, eyewear and face-masks should always be worn.

This procedure requires the use of very small quantities of ingredients. All calculations and preparation techniques must be verified before dispensing the final product.



Suggested Formula	Itraconazole 1%, Levofloxacin 2%, Mupirocin 2% Topical Ointment (Suspension, 25 g)	FIN	F 006 359
-------------------	--	-----	-----------

SUGGESTED PREPARATION (for 25 g)

Weigh and / or measure the following ingredients when appropriate:

Ingredient Listing	Qty.	Unit	Multiplication factor (*): _____	Processing Error	Qty. to measure
Itraconazole, USP §	0.250	g			
Levofloxacin, USP §	0.500	g			
Mupirocin, USP	TBD				
Propylene Glycol, USP §	3.0	mL			
Medisca AlpaWash™	TBD				

§ Weigh / measure just prior to use.

* Takes into account increased batch size conversions and density conversions, if required.

Preparatory Instruction

1. Ingredient quantification:

A. Determine the quantity (in g) of Mupirocin required to make a Mupirocin 2% Topical Ointment, batch size (25 g):

Quantity of Mupirocin required for 25 g	500 mg
DIVIDED BY	
Assay result (from certificate of analysis: µg/mg = mg/g)	_____ µg/mg
EQUALS	
i. Quantity of Mupirocin needed for 25 g	_____ g
MULTIPLIED BY	
Processing error adjustments (12 to 15%)	1.12 to 1.15
EQUALS	
ii. Quantity of Mupirocin needed <i>plus</i> processing error adjustments	_____ g



Suggested Formula	Itraconazole 1%, Levofloxacin 2%, Mupirocin 2% Topical Ointment (Suspension, 25 g)	FIN	F 006 359
-------------------	--	-----	-----------

2. **Ingredient quantification:**

A. Determine the actual quantity of AlpaWash™ to weigh for the required batch size (25 g):

Total Weight of the batch	25.00 g
MINUS	
Total amount of other ingredients except Mupirocin	3.864 g
MINUS	
The weight of Mupirocin (Step 1Ai)	_____ g
EQUALS	
i. Quantity of AlpaWash™ needed for 25 g	_____ g
MULTIPLIED BY	
Processing error adjustments (12 to 15%)	1.12 to 1.15
EQUALS	
ii. Weight of AlpaWash™ required <i>plus</i> processing error adjustments	_____ g

3. **Powder-liquid preparation:**

A. Combine and triturate the following ingredients together to form a fine homogeneous powder blend:

- Itraconazole
- Levofloxacin
- Mupirocin (amount determined in Step 1Aii)

B. Levigate the fine, homogeneous powder blend (Step 3A) with the Propylene Glycol.

End result: Homogeneous paste-like dispersion.



Suggested Formula	Itraconazole 1%, Levofloxacin 2%, Mupirocin 2% Topical Ointment (Suspension, 25 g)	FIN	F 006 359
-------------------	--	-----	-----------

4.	<p><u>Powder-liquid to medium integration:</u></p> <p>A. Incrementally add the homogeneous paste-like dispersion (Step 3B) to the AlpaWash™ (Step 2Aii).</p> <p><u>Specifications:</u> Continuously mix, using high-shear mixing techniques.</p> <p><u>End result:</u> Homogeneous gel-like dispersion.</p> <p>B. If the final result is gritty, pass it through the ointment mill until it becomes smooth and uniform.</p>
5.	<p><u>Product transfer:</u></p> <p>Transfer the final product into the specified dispensing container (see “Packaging Requirements”).</p>





Suggested Formula	Itraconazole 1%, Levofloxacin 2%, Mupirocin 2% Topical Ointment (Suspension, 25 g)	FIN	F 006 359
-------------------	--	-----	-----------

SUGGESTED PRESENTATION

Estimated Beyond-Use Date	6 months, as per USP*.	Packaging Requirements	- Tightly closed, light-resistant container. - To be administered with a metered-dose measuring device.	
Auxiliary Labels	1	Use as directed. Do not exceed prescribed dose.	6	Protect from light.
	2	Keep out of reach of children.	7	Cap tightly after use.
	3	Consult your health care practitioner if any other prescription or over-the-counter medications are currently being used or are prescribed for future use.	8	For external use only.
	4	Keep in a dry place.	9	May impair mental and/or physical ability. Use care when operating a car or machinery.
	5	Keep at room temperature (20°C – 23°C).	10	Do not take with alcohol, sleep aids, tranquilizers or other CNS depressants.
Pharmacist Instructions	<p>Note: This non-sterile formulation, as per USP <3>, should not be applied to an open wound or burned area. If this formulation will be applied to an open wound or burned area, it must be prepared within the appropriate facilities under adequate environmental conditions, following the necessary guidelines and procedures as stated within USP <797>. Also, in consideration of the overall formulation make-up and following the manufacturer's specifications, the suggested method of end-stage sterilization is gamma irradiation. The resulting BUD will be 30 days, as per USP <797>, based on a successful sterility test result.</p> <p>Add any auxiliary labels specific to the API to the dispensing container as deemed necessary.</p>			
Patient Instructions	<p>Contact your pharmacist in the event of adverse reactions.</p> <p>IMPORTANT: The quantity of API administered is directly dependent on the quantity of product applied.</p>			

* The BUD is not later than the time remaining until the earliest expiration date of any API or 6 months, whichever is earlier.



Suggested Formula	Itraconazole 1%, Levofloxacin 2%, Mupirocin 2% Topical Ointment (Suspension, 25 g)	FIN	F 006 359
-------------------	--	-----	-----------

REFERENCES

1.	Ointments, Creams, and Pastes. In: Allen, LV, Jr. <i>The Art, Science and Technology of Pharmaceutical Compounding Fourth Edition</i> . American Pharmaceutical Association; 2012: 265.
2.	Itraconazole. In: Sweetman SC, ed. <i>Martindale: The Complete Drug Reference, 36th Edition</i> . London, England: The Pharmaceutical Press; 2009: 536.
3.	Levofloxacin. In: Sweetman SC, ed. <i>Martindale: The Complete Drug Reference, 36th Edition</i> . London, England: The Pharmaceutical Press; 2009: 292.
4.	Mupirocin. In: Sweetman SC, ed. <i>Martindale: The Complete Drug Reference, 36th Edition</i> . London, England: The Pharmaceutical Press; 2009: 302.
5.	Itraconazole (Monograph). In: O'Neil MJ. <i>The Merck Index 15th Edition</i> . Whitehouse Station, NJ: Merck & Co, Inc.; 2013: #5292.
6.	Ofloxacin (Monograph). In: O'Neil MJ. <i>The Merck Index 15th Edition</i> . Whitehouse Station, NJ: Merck & Co, Inc.; 2013: #6863.
7.	Mupirocin (Monograph). In: O'Neil MJ. <i>The Merck Index 15th Edition</i> . Whitehouse Station, NJ: Merck & Co, Inc.; 2013: #6388.
8.	Mupirocin. In: Trissel LA. <i>Trissel's Stability of Compounded Formulations, 5th Edition</i> . American Pharmaceutical Association; 2012: 344.
9.	Itraconazole. In: Trissel LA. <i>Trissel's Stability of Compounded Formulations, 5th Edition</i> . American Pharmaceutical Association; 2012: 268.
10.	Itraconazole (Monograph). <i>United States Pharmacopeia XXXVIII / National Formulary 33</i> . Rockville, MD. US Pharmacopeial Convention, Inc. 2015: 3989.
11.	Levofloxacin (Monograph). <i>United States Pharmacopeia XXXVIII / National Formulary 33</i> . Rockville, MD. US Pharmacopeial Convention, Inc. 2015: 4080.
12.	Mupirocin (Monograph). <i>United States Pharmacopeia XXXVIII / National Formulary 33</i> . Rockville, MD. US Pharmacopeial Convention, Inc. 2015: 4459.
13.	Mupirocin Topical. Thomson Micromedex. <i>USP DI – Drug Information for the Health Care Professional, 26th Edition</i> . Taunton, MA: US Pharmacopeial Convention, Inc; 2006: 2137.
14.	USP <795>. <i>United States Pharmacopeia XXXVIII / National Formulary 33</i> . Rockville, MD. US Pharmacopeial Convention, Inc. 2015: 559.

DISCLAIMER: MEDISCA NETWORK INC., HEREBY REFERRED TO AS 'THE NETWORK', HAS PROVIDED THE FORMULA AND INSTRUCTIONS ABOVE AS A MODEL FOR EDUCATIONAL PURPOSES ONLY ON THE BASIS OF THE RECOGNIZED COMPENDIA AND TEXTS REFERENCED AT THE END OF THIS DOCUMENT. THE NETWORK TAKES NO RESPONSIBILITY FOR THE VALIDITY OR ACCURACY OF THIS INFORMATION OR FOR ITS SAFETY OR EFFECTIVENESS, NOR FOR ANY USE THEREOF, WHICH IS AT THE SOLE RISK OF THE LICENSED PHARMACIST. ADJUSTMENTS MAY BE NEEDED TO MEET SPECIFIC PATIENT NEEDS AND IN ACCORDANCE WITH A LICENSED PRESCRIBER'S PRESCRIPTION. THE PHARMACIST MUST EMPLOY APPROPRIATE TESTS TO DETERMINE THE STABILITY OF THIS SUGGESTED FORMULA. THE NETWORK CANNOT BE HELD LIABLE TO ANY PERSON OR ENTITY CONCERNING CLAIMS, LOSS, OR DAMAGE CAUSED BY, OR ALLEGED TO BE CAUSED BY, DIRECTLY OR INDIRECTLY, THE USE OR MISUSE OF THE INFORMATION CONTAINED IN THIS SUGGESTED FORMULA. IN ALL CASES IT IS THE RESPONSIBILITY OF THE LICENSED PHARMACIST TO KNOW THE LAW, TO COMPOUND ANY FINISHED PRODUCT AND TO DISPENSE THESE PRODUCTS IN ACCORDANCE WITH FEDERAL AND STATE LAW.