

TELEPHONE: 514-905-5096 FAX: 514-905-5097 technicalservices@medisca.net

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Suggested Formula Diazepam 5 mg Rectal Suppositories (Solid Suspension, 100 x 1.3 mL Suppositories) FIN F 001 603v2

SUGGESTED FORMULATION

Ingredient Listing	Qty.	Unit	NDC#	Supplier	Lot Number	Expiry Date
Diazepam, USP	0.500	g				
Silica Gel	2.50	g				
Propylene Glycol, USP	5.0	mL				
Medisca Polypeg (Suppository base)	TBD		,	(A)		

SPECIAL PREPARATORY CONSIDERATIONS

Ingredient-Specific Information					
Controlled substance (adhere a documentation procedures)	to proper handling and Diazepam				
Light sensitive (protect from li	ght whenever possible): Diazepam, Propylene Glycol				
Hygroscopic (protect from moi	sture whenever possible): Silica Gel, Propylene Glycol				
Suggested Preparatory Guidelines					
Non-Sterile Preparat	ion Sterile Preparation				
Processing Error / Testing Considerations:	To account for processing error considerations during preparation, it is suggested to measure an additional 5 to 9% 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.				



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SUGGESTED PREPARATION (for 100 x 1.3 mL suppositories)

Weigh and / or measure the following ingredients when appropriate:

Ingredient Listing	Qty.	Unit	Multiplication factor (*):	Processing Error	Qty. to measure
Diazepam, USP §	0.500	g			
Silica Gel §	2.50	g	(S)		
Propylene Glycol, USP §	5.0	mL	777		
Medisca Polypeg (Suppository base)	TBD	~			

- * Takes into account increased batch size conversions and density conversions, if required.
- § Weigh / measure just prior to use.

	Preparatory Instruction				
1.	Preparatory step: A. Prepare a hot water bath Specifications: Temperature: 60 to 65°C.				
2.	Ingredient quantification (mold calibration): Calculate the quantity of Polypeg (Suppository Base) required for 100 suppositories. Refer to the Appendix for details.				



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3. **Powder-liquid preparation:**

- A. Combine and triturate the following ingredients together to form a fine, homogeneous powder blend:
 - Diazepam
 - Silica Gel
- B. Levigate the fine, homogeneous powder blend (Step 3A) with the following ingredient:
 - Propylene Glycol

End result: Homogeneous paste-like dispersion.

4. **Medium preparation:**

- A. Using the hot water bath, melt the following ingredient:
 - Polypeg (Suppository base) (amount determined from Appendix, Step 7B)

Specifications: Maintain temperature between 60 and 65°C

End result: Homogeneous liquid-like solution

IMPORTANT: Do not allow the temperature to exceed 65°C.



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5. **Powder-liquid to medium integration:**

- A. Using the hot water bath, incrementally add the homogeneous paste-like dispersion (Step 3B) to the following ingredient:
 - Homogeneous liquid-like solution (Step 4A).

Specifications: Continuously mix.

Maintain temperature between 60 and 65°C.

End result: Homogeneous liquid-like dispersion.

IMPORTANT: Do not add the homogeneous paste-like dispersion (Step 3B) until the temperature

of the Polypeg reaches 60 - 65°C.

Do not allow the temperature to exceed 65°C

6. **Mold filling:**

- A. Remove the homogeneous liquid-like dispersion (Step 5A) from the hot water bath. With continuous stirring, allow to cool slightly, until the mixture is thicker (with a lotion-like consistency).
- B. Fill each of 100 mold cavities with the mixture. If the mixture starts to solidify, reheat to 60 65°C, and repeat the filling procedure.
- C. Once the cavities have been filled, allow the suppositories to cool to room temperature.
- D. If necessary, trim the tops of the suppositories with a sharp blade or a hot spatula.

7. Validation technique (average solid dose weight):

- A. Weigh 20 suppositories.
- B. The final weight of each suppository (not including suppository mold) shall not be less than 90% and not more than 110% of the theoretically calculated weight for each unit (Appendix, Step 7A) in accordance to USP guidelines.
- 8. **Product transfer (solid-to-dispensing container filling):**

Transfer the final product into the specified dispensing container (see "Packaging Requirements").



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SUGGESTED PRESENTATION

U	GESTED PRI	:3E	NIATION			
	Estima Beyond-Use D		30 days, refrigerated.	Packa Requiren		Individually wrapped in a tight, light-resistant foil and placed in a box or wide-mouth container.
		1	Use as directed. Do not exceed dose.	l prescribed	7	Protect from light.
		2	Keep out of reach of children.		8	Keep in a dry place.
		3	For rectal use only.		9	Equilibrate to room temperature before use.
	Auxiliary Labels	4	Keep refrigerated. Do not freeze		10	Controlled substance. Dangerous unless used as directed.
	Labels	5	Do not take with alcohol, sleep aids tranquilizers or other CNS depressants.		11	Consult your health care practitioner if any other prescription or over-the-counter medications are currently being used or are prescribed for future use.
		6	May impair mental and of ability. Use care when operationachinery.		12	May produce psychological and/or physical dependence.
Pharmacist Instructions Add any auxiliary labels specific to the API to the dispensing container as deemed necessary. Patient Instructions Contact your pharmacist in the event of adverse reactions.				nsing container as deemed necessary.		
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Appendix Suppository mold calibration

SUGGESTED CALCULATION

End result:

GGES	GESTED CALCULATION						
	Preparatory Instruction						
1.	Pre	Preparatory step:					
	A.	Prepare a hot water bath					
		Specifications: Temperature: 60 to 65°C.					
2.	Vel	nicle preparation:	€				
	We	igh and/or measure the following ingredien	its:				
		Ingredient	Quantity				
		Silica Gel	0.25 g				
		Propylene Glycol, USP	.0.5 mL				
		Medisca Polypeg (Suppository Base)	14.32 g				
3.	Pov	vder-liquid preparation:					
	A. Triturate the following ingredient to form a fine, homogeneous powder:						
	- Silica Gel						
	B.	Levigate the fine homogeneous powder (S	tep 3A) with following ingredient:				
		- Propylene Glycol					

Homogeneous paste-like dispersion.



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Appendix Suppository mold calibration 4. **Medium preparation:** A. Using the hot water bath, melt the following ingredient: - Polypeg (Suppository Base) Specifications: Maintain temperature between 60 and 65°C. End result: Homogeneous liquid-like solution. IMPORTANT: Do not allow the temperature to exceed 65°C. 5. **Powder-liquid to medium integration:** A Using the hot water bath, incrementally add the homogeneous paste-like dispersion (Step 3B) to the following ingredient: - Homogeneous liquid-like solution (Step 4A). Specifications: Continuously mix. Maintain temperature between 60 and 65°C End result: Homogeneous liquid-like dispersion. IMPORTANT: Do not add the homogeneous paste-like dispersion (Step 3B) until the temperature of the Polypeg reaches 60 - 65°C. Do not allow the temperature to exceed 65°C. 6. Mold filling: A. Remove the homogeneous liquid-like dispersion (Step 5A) from the hot water bath. With continuous stirring, allow to cool slightly, until the mixture is thicker (with a lotion-like consistency). B. Fill 5 mold cavities with the mixture. If the mixture starts to solidify, reheat to 60 - 65°C, and repeat the filling procedure.

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C. Once the cavities have been filled, allow the suppositories to cool to room temperature.

D. If necessary, trim the tops of the suppositories with a sharp blade or a hot spatula.



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1	Appendix	Suppository mold calibration	
7.		redient calculation:	
	A. (Calculate the average weight of a suppository (not including weight of the empty suppository mold)):
		Weight of the 5 suppositories: g	
		DIVIDED BY	
		Number of suppositories: 5	
		EQUALS	
		Average (theoretical) weight of a suppository:	
	В. С	Calculate the quantity of Polypeg (Suppository Base) contained in a single suppository:	
		Average weight of a suppository (from Step 7A):	
		MINUS	
		Combined quantity of Diazepam, Silica Gel and Propylene Glycol in each suppository: 0.082 g	
		EQUALS	
		Quantity of Polypeg (Suppository Base) contained in a single suppository: g	
		MULTIPLIED BY	
		Number of suppositories in batch 100	
		EQUALS	
		Quantity of Polypeg (Suppository Base) required for 100 suppositories g	
		MULTIPLIED BY	
		Processing error adjustments (5 to 9%) 1.05 to 1.09	
		EQUALS	
		Quantity of Polypeg (Suppository Base) required plus processing error g	