

**CENTER FOR DRUG EVALUATION AND
RESEARCH**

APPLICATION NUMBER:

21-620

CHEMISTRY REVIEW(S)

Review of Chemistry, Manufacturing, and Controls

NDA 21-620

Mucinex[®] DM Extended Release Tablets

Adams Laboratories

by

Chemistry Reviewer: David A. Place, PhD

Division of New Drug Chemistry II – HFD-820

for

Clinical Review Division: HFD-570

Division of Pulmonary and Allergy Drug Products

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Chemistry Review Data Sheet

1. NDA 21-620
2. REVIEW # 1
3. REVIEW DATE: 15-APR-2004
4. REVIEWER: David A. Place, PhD, HFD-820
5. PREVIOUS DOCUMENTS:

Previous Documents
N/A

Document Date

6. SUBMISSION(S) BEING REVIEWED:

<u>Submission(s) Reviewed</u>	<u>Document Date</u>
Original	30-JUN-2003
Responses to Filing Review Letter	11-NOV-2003
Stability Data Update	30-JAN-2004
Response to Post-approval requests	25-MAR-2004

7. NAME & ADDRESS OF APPLICANT:

Name: Adams Laboratories, Inc.
 Address: 14801 Sovereign Road, Fort Worth, TX 76155-2645
 Representative: D. Jeffrey Keyser, VP Development and Regulatory Affairs
 Telephone: (817) 786-1243

8. DRUG PRODUCT NAME/CODE/TYPE:

- a) Proprietary Name: Mucinex[®] DM
- b) Non-Proprietary Name: Guaifenesin and Dextromethorphan HBr
- c) Code Name/# (ONDC only): MK-0869 and L-754030
- d) Chem. Type/Submission Priority (ONDC only):
 - Chem. Type: 3
 - Submission Priority: S

9. LEGAL BASIS FOR SUBMISSION: 505(b)(2)

10. PHARMACOLOGICAL CATEGORY/INDICATION: Expectorant and cough suppressant

11. DOSAGE FORM: Bi-layered Extended Release Tablets

12. STRENGTH/POTENCY: 600/30 and 1200/60 mg — Guaifenesin / Dextromethorphan HBr

13. ROUTE OF ADMINISTRATION: Oral

14. R_x /OTC DISPENSED: R_x ___ OTC X

CHEMISTRY REVIEW – Data Sheet

15. SPOTS (Special Products On-Line Tracking System)

_____ SPOTS product – Form Completed

X Not a SPOTS product

16. CHEMICAL NAME, STRUCTURAL FORMULA, MOLECULAR FORMULA, MOLECULAR WEIGHT:

Chemical Name(s): 1,2 propanediol, 3-(2-methoxyphenoxy)

D-3-Methoxy-17-methyl-9 α , 13 α , 14 α -morphinan hydrobromide

Molecular Formula: C₁₀H₁₄O₄

C₁₈H₂₅NO•HBr•H₂O

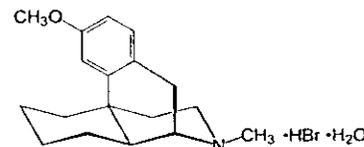
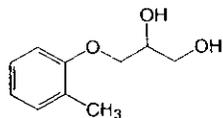
Molecular Weight: 198.22

370.32

CAS Registry No. 93-14-1

6700-34-1

Structure:



17. RELATED/SUPPORTING DOCUMENTS:

A. DMFs:

DMF #	TYPE	HOLDER	ITEM REFERENCED	CODE ^a	STATUS ^b	DATE REVIEW COMPLETED	COMMENTS
	II			1	Adequate	Oct. 2003	by D. A. Place
	II			3	Adequate	May 2003	by J. Salemmme
	III			3	Adequate	Sept. 2000	by D. Klein DMF Strike Force
	III			3	Adequate	April 2002	by J. Boal
	III			3	Adequate	Oct. 2003	by M. Heimann
	III			3	Adequate	Mar. 2002	by D. Christodoulo
	III			3	Adequate	Aug. 2001	by P. Peri
	III			3	Adequate	Sept. 2002	by B. Wu

a. Action codes for DMF Table:

1 – DMF Reviewed.

Other codes indicate why the DMF was not reviewed, as follows:

2 – Type 1 DMF

3 – Reviewed previously and no revision since last review

4 – Sufficient information in application

5 – Authority to reference not granted

6 – DMF not available

7 – Other (explain under "Comments")

b Adequate, Inadequate, or N/A (There is enough data in the application, therefore the DMF did not need to be reviewed)

B. Other Documents:

DOCUMENT	APPLICATION NUMBER	DESCRIPTION
IND	I 60,922	Mucinex DM
NDA	N 21282	Mucinex
NDA	N 21585	Mucinex D

US Patent (Expires): None

Exclusivity: Three years requested.

CHEMISTRY REVIEW – Data Sheet

18. STATUS:

ONDC:

CONSULTS/ CMC Related Reviews	RECOMMENDATION	DATE	REVIEWER
Biometrics		N/A	
EES	Acceptable (all sites)	8/29 - 9/12/03	OC
Pharm/Tox		N/A	
Biopharm	Full review—see section on dissolution	N/A	
LNC	USAN Approved	N/A	
Methods Validation	To be requested after approval	N/A	
OPDRA	Acceptable	N/A	
EA	Categorical Exclusion Satisfactory	2/19/04	David Place
Microbiology		N/A	

OGD:

CONSULTS/ CMC Related Reviews	RECOMMENDATION	DATE	REVIEWER
Microbiology	N/A		
EES	N/A		
Methods Validation	N/A		
Labeling	N/A		
Bioequivalence	N/A		
EA	N/A		
Radiopharmaceutical	N/A		

19. ORDER OF REVIEW (OGD Only): *Not Applicable*

The application submission(s) covered by this review was taken in the date order of receipt. Yes
 No If no, explain reason(s) below:

III. Administrative

A. Reviewer's Signature

Chemist David A. Place, PhD _____ Date: 15-APR-2004

B. Endorsement Block Same date as draft review

Chemistry Team Leader Richard T. Lostritto, PhD _____ Date:
Project Manager Colette Jackson _____ Date:

cc: Orig. NDA 21-620
HFD-160/Division File
HFD-820/ChemDivDir/EDuffy
HFD-180/MO/
HFD-180/Pharm/
HFD-180/DivDir/

37 Page(s) Withheld

X § 552(b)(4) Trade Secret / Confidential

_____ § 552(b)(5) Deliberative Process

_____ § 552(b)(5) Draft Labeling