CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER: NDA 18118

CHEMISTRY REVIEW(S)

DIVISION OF CARDIO-RENAL DRUG PRODUCTS
CHEMIST'S REVIEW #1, ORIGINAL SUMMARY

DATE COMPLETED: May 12, 1978

1-27-83 noted JH

A. 1. NDA #: 18-118

SPONSOR: Burroughs-Wellcome Co.

ADDRESS: 3030 Cornwallis Road
Research Triangle Park
North Carolina 27709

AF #: [redacted]

2. PRODUCT NAME(s):

Proprietary: Lanoxicap

Non-Proprietary: Digoxin, (USP XIX)
(USAN)

3. DOSAGE FORM AND ROUTE OF ADMINISTRATION: (Rx or OTC)

Rx: Solution, encapsulated in soft gelatin capsule, for oral administration 0.05 mg, 0.1 mg and 0.2 mg strengths.

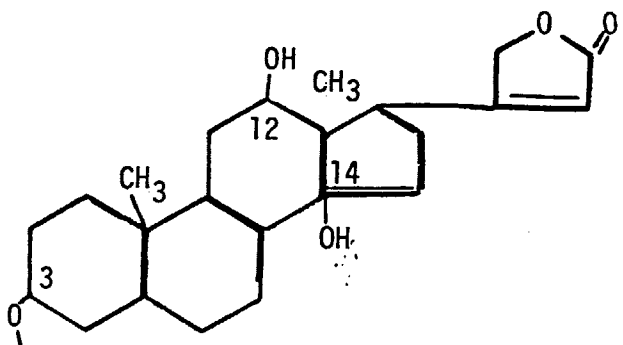
4. PHARMACOLOGICAL CATEGORY AND/OR PRINCIPAL INDICATION:

Cardiotonic Glycoside.

5. STRUCTURAL FORMULA AND CHEMICAL NAME:

Type 3: New formulation, marketed by the same manufacturer.

Digoxin



$C_{18}H_{31}O_9$ (Tridigitoxose)

See USP XIX for chemical names and related Digitoxin formula.

(See attached for further information)

B. 1. INITIAL SUBMISSION: January 9, 1978

RECEIPT DATE, BD: January 10, 1978

2. AMENDMENTS: None

3. SUPPORTING IND'S, NDA'S, DMF'S AND LETTERS OF AUTHORIZATION:

NDA 9-330:	Lanoxin Brand Digoxin Injection (B-W)
IND [redacted]	Lanoxicap Capsules (B-W) (Chem. Review #1, 9/26/74)
DMF [redacted] and [redacted]	[redacted] for manufacturer of solution and filling of soft gelatin capsules. Authorization to refer to the file is contained in the NDA.
DMF [redacted]	[redacted] for packaging of unit dose packs and blister cards. Authorization to refer to this file is contained in the NDA.
DMF [redacted]	Burroughs Wellcome Co.
DMF [redacted]	[redacted] (child resistant closure products).
DMF [redacted]	[redacted] ("Clic-Loc" child resistant closure).

4. RELATED DOCUMENTS (IND'S, NDA'S, ETC.):

None other than those noted under 3 above.

C. REMARKS:

This new drug application is being submitted following studies performed under IND [redacted] and NDA 9-330 on Lanoxicaps - a soft gelatin capsule of a new liquid solution formulation of digoxin. Studies showed more rapid and complete absorption than solid tablets, since 100% dissolution was assured with the liquid formulation. Refer to the reviews of IND [redacted] for more detail.

The new drug substance will be manufactured by B-W under an approved NDA, shipped in bulk to [redacted] for manufacture of the solution and encapsulation. Bulk capsules will be shipped back to B-W for packaging into bottles of 100 and 1000. Alternately B-W will ship bulk capsules to [redacted] for unit dose and blister packs.

D. CONCLUSIONS AND/OR RECOMMENDATIONS :

This application is well organized and presentation is fairly clear.

It is considered approvable from a manufacturing and controls standpoint pending methods validation, establishment inspection report, and satisfactory elucidation and answers to several questions raised in this review - [redacted].

Peter L. Martese

Peter L. Martese, Chemist

ORIG NDA
HFD-102:C.Kumkumian
HFD-110
HFD-110:CSO
HFD-110:P.L.Martese:ph:5/22/78
R/D init. by:J.Langston:5/16/78

J. Langston 5/22/78