



## The Government Pharmaceutical Organization Rangsit Pharmaceutical Production Plant

DOCUMENT NUMBER:	RPP-SP-QC-RM-119
DOCUMENT TITLE:	SPECIFICATION OF CARVEDILOL (ITEM NO. 44110045)
DOCUMENT NOTES:	
cument Information	

#### Do

Revision: 01 RPP STP\_SP-rel Vault:

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#### **Date Information**

03 Mar 2022 Effective Date: Next Review Date:

03 Mar 2022 Release Date: **Expiration Date:** 

### **Control Information**

PORNTHIP\_W Author: Previous Number:

PORNTHIP\_W Packet-3253 Owner: Change Number:





THE GOVERNMENT PHARMACEUTICAL ORGANIZATION RANGSIT PHARMACEUTICAL PRODUCTION PLANT		
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#### **REVISION HISTORY**

Rev.No.	Change & Reason For Change	Effective Date
01	Initial Release	As per effective date in electronic system





THE GOVERNMENT PHARMACEUTICAL ORGANIZATION RANGSIT PHARMACEUTICAL PRODUCTION PLANT		
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### A. Specification

Description   White or nearly white, crystalline powder.	at a state of the
and in dilute acids.  The infrared absorption spectrum of the sample exhibit maxima only at the same wavelengths as that of a simi preparation of the corresponding standard.  Identification (B)  The retention time of the major peak of the Sample sol corresponds to that of the Standard solution, as obtaine the Assay.  Identification (XRPD)(*)  The X-Ray diffractogram of the sample should match the Carvedilol (Form II).  Assay  98.0-102.0% w/w of C <sub>24</sub> H <sub>26</sub> N <sub>2</sub> O <sub>4</sub> calculated on the dried basis.  Seridue on ignition  Not more than 0.1%  Not more than 10 ppm  Not more than 0.1%.  Not more than 0.1%.  Not more than 0.15 %.  Not more than 0.15 %.  Not more than 0.15 %.  Not more than 0.1%.  Not more than 0.1%.	at a state of the
The infrared absorption spectrum of the sample exhibit maxima only at the same wavelengths as that of a simi preparation of the corresponding standard.    Identification (B)	ution d in with
maxima only at the same wavelengths as that of a simi preparation of the corresponding standard.  Identification (B)  The retention time of the major peak of the Sample sol corresponds to that of the Standard solution, as obtaine the Assay.  Identification (XRPD)(*)  The X-Ray diffractogram of the sample should match the Carvedilol (Form II).  4 Assay  98.0-102.0% w/w of C <sub>24</sub> H <sub>26</sub> N <sub>2</sub> O <sub>4</sub> calculated on the drie basis.  D5 Residue on ignition  Not more than 0.1%  Heavy metals(*)  Organic impurities  a. Carvedilol related compound E  b. Carvedilol related compound A  c. Carvedilol  Bisalkylpyrocatechol derivative (if present)  d. Carvedilol related compound C  e. Carvedilol related compound B  Not more than 0.1%.  Not more than 0.15 %.  Not more than 0.1%.	ution d in with
preparation of the corresponding standard.  Identification (B)  The retention time of the major peak of the Sample sol corresponds to that of the Standard solution, as obtaine the Assay.  Identification (XRPD)(*)  The X-Ray diffractogram of the sample should match the Carvedilol (Form II).  98.0-102.0% w/w of C <sub>24</sub> H <sub>26</sub> N <sub>2</sub> O <sub>4</sub> calculated on the dried basis.  05 Residue on ignition  Not more than 0.1%  Not more than 10 ppm  07 Organic impurities  a. Carvedilol related compound E  b. Carvedilol related compound A  c. Carvedilol  Bisalkylpyrocatechol derivative (if present)  d. Carvedilol related compound C  e. Carvedilol related compound B  f. Carvedilol related compound B  Not more than 0.02%.  Not more than 0.1%.	ution d in with
Identification (B)  The retention time of the major peak of the Sample sol corresponds to that of the Standard solution, as obtained the Assay.  Identification (XRPD)(*)  The X-Ray diffractogram of the sample should match with the Carvedilol (Form II).  O4 Assay  98.0-102.0% w/w of C <sub>24</sub> H <sub>26</sub> N <sub>2</sub> O <sub>4</sub> calculated on the dried basis.  O5 Residue on ignition  Not more than 0.1%  Not more than 10 ppm  O7 Organic impurities  a. Carvedilol related compound E b. Carvedilol related compound A c. Carvedilol Bisalkylpyrocatechol derivative (if present)  d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B  Not more than 0.1%.  Not more than 0.19%.	d in with
corresponds to that of the Standard solution, as obtaine the Assay.  Identification (XRPD)(*)  The X-Ray diffractogram of the sample should match the Carvedilol (Form II).  O4 Assay  98.0-102.0% w/w of C <sub>24</sub> H <sub>26</sub> N <sub>2</sub> O <sub>4</sub> calculated on the drie basis.  O5 Residue on ignition  Not more than 0.1%  Heavy metals(*)  O7 Organic impurities  a. Carvedilol related compound E  b. Carvedilol related compound A  c. Carvedilol  Bisalkylpyrocatechol derivative (if present)  d. Carvedilol related compound C  e. Carvedilol related compound B  f. Carvedilol related compound B  Not more than 0.1%.  Not more than 0.15%.  Not more than 0.02%.  Not more than 0.1%.  Not more than 0.1%.  Not more than 0.1%.	d in with
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Identification (XRPD) <sup>(*)</sup> The X-Ray diffractogram of the sample should match the Carvedilol (Form II).  O4 Assay  98.0-102.0% w/w of C <sub>24</sub> H <sub>26</sub> N <sub>2</sub> O <sub>4</sub> calculated on the dried basis.  O5 Residue on ignition  Not more than 0.1%  Not more than 10 ppm  O7 Organic impurities  a. Carvedilol related compound E  b. Carvedilol related compound A  c. Carvedilol  Bisalkylpyrocatechol derivative (if present)  d. Carvedilol related compound C  e. Carvedilol related compound B  Not more than 0.1%.  Not more than 0.15%.  Not more than 0.02%.  Not more than 0.1%.  Not more than 0.1%.  Not more than 0.1%.  Not more than 0.1%.	
the Carvedilol (Form II).  04 Assay  98.0-102.0% w/w of C <sub>24</sub> H <sub>26</sub> N <sub>2</sub> O <sub>4</sub> calculated on the dried basis.  05 Residue on ignition  Not more than 0.1%  Not more than 10 ppm  07 Organic impurities  a. Carvedilol related compound E b. Carvedilol related compound A c. Carvedilol Bisalkylpyrocatechol derivative (if present)  d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B  Not more than 0.1%.  Not more than 0.02%.  Not more than 0.1%.  Not more than 0.1%.  Not more than 0.1%.	
98.0-102.0% w/w of C <sub>24</sub> H <sub>26</sub> N <sub>2</sub> O <sub>4</sub> calculated on the dried basis.  05 Residue on ignition  06 Heavy metals <sup>(*)</sup> Organic impurities  a. Carvedilol related compound E b. Carvedilol related compound A c. Carvedilol Bisalkylpyrocatechol derivative (if present) d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B  Not more than 0.1%. Not more than 0.15 %.  Not more than 0.02%. Not more than 0.1%. Not more than 0.1%. Not more than 0.1%.	ed
basis.    Description	ed
05 Residue on ignition  06 Heavy metals <sup>(*)</sup> 07 Organic impurities  a. Carvedilol related compound E b. Carvedilol related compound A c. Carvedilol Bisalkylpyrocatechol derivative (if present)  d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B  Not more than 0.1%.	
Of Heavy metals <sup>(*)</sup> Not more than 10 ppm  Organic impurities  a. Carvedilol related compound E b. Carvedilol related compound A c. Carvedilol Bisalkylpyrocatechol derivative (if present) d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B  Not more than 0.1%.	
07 Organic impurities a. Carvedilol related compound E b. Carvedilol related compound A c. Carvedilol Bisalkylpyrocatechol derivative (if present) d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B Not more than 0.1%. Not more than 0.02%. Not more than 0.1%. Not more than 0.1%. Not more than 0.1%.	
a. Carvedilol related compound E b. Carvedilol related compound A c. Carvedilol Bisalkylpyrocatechol derivative (if present) d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B  Not more than 0.1%.	
b. Carvedilol related compound A c. Carvedilol Bisalkylpyrocatechol derivative (if present) d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B  Not more than 0.1%.	
c. Carvedilol Bisalkylpyrocatechol derivative (if present) d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B  Not more than 0.15 %.  Not more than 0.15 %.  Not more than 0.19%.  Not more than 0.19%.	I
Bisalkylpyrocatechol derivative (if present)  d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B  Not more than 0.1%.  Not more than 0.1%.	
(if present) d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B Not more than 0.1%. Not more than 0.1%.	
d. Carvedilol related compound C e. Carvedilol related compound D f. Carvedilol related compound B Not more than 0.02%. Not more than 0.1%.	
e. Carvedilol related compound D f. Carvedilol related compound B Not more than 0.1%. Not more than 0.1%.	
f. Carvedilol related compound B Not more than 0.1%.	
1 1	
g. Any other individual impurity   Not more than 0.10%.	
h. Total impurities Not more than 0.5%.	
1	
08 Loss on drying Not more than 0.5% w/w.	
09 Residual solvents <sup>(*)</sup>	
a. Methanol Not more than 1000 ppm	
b. Ethanol Not more than 1000 ppm	
c. Acetone Not more than 1000 ppm	
d. Dichloromethane Not more than 500 ppm	
e. Ethyl acetate Not more than 4000 ppm	
f. Monoglyme Not more than 100 ppm	
g. Isopropyl acetate Not more than 1000 ppm	
10 Particle size <sup>(*)</sup>	
• d (0.5) Not more than 10 μm	
• d (0.9) Not more than 25 μm	

<sup>\*</sup> In-house specification.





# MASTER

THE GOVERNMENT PHARMACEUTICAL ORGANIZATION RANGSIT PHARMACEUTICAL PRODUCTION PLANT		
TITLE	SPECIFICATION OF CARVEDILOL (ITEM NO. 44110045)	Rev. 01
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#### B. Storage condition

Preserve in tight containers, and store at controlled room temperature.

#### C. References

- 1. USP39, Carvedilol monograph, page 2958-2960.
- 2. Raw Material Specification Document No. RMS-RA-79N54170-01, Carvedilol.

#### D. Product Information

Approved source (s)	Refer to current version of Approved Supplier List (ASL) and/or		
W 200	Provisional Supplier List (as follow RPP-SOP-QA-029: Supplier		
	Qualification) of Carvedilol (Item No. 44110045).		
Sampling plan	Identification: Every container.		
	Other tests: $\sqrt{N} + 1$ .		
Testing procedure	Test to be performed as per current version of Standard Testing		
*	Procedure of Carvedilol (Item No. 44110045).		
Retest period	1 year.		





Revision: 01

#### Signature Manifest

Document Number: RPP-SP-QC-RM-119

Title: SPECIFICATION OF CARVEDILOL (ITEM NO. 44110045)

Effective Date: 03 Mar 2022

All dates and times are in GMT +7.

## Pls. review RPP-SP-QC-RM-119 SPECIFICATION OF CARVEDILOL (ITEM NO. 44110045)

#### Step 1. Preparer

Name/Signature	Title	Date	Meaning/Reason
PORNTHIP WONGMATHAVEE (PORNTHIP_W)	QC Pharmacist	18 Feb 2022, 11:07:11 PM	Complete
ORAWIN MANGKHLADUNG (ORAWIN_M)	HEAD OF QC SECTION 1	21 Feb 2022, 08:16:54 AM	Complete

#### Step 2. Reviewer

Name/Signature	Title	Date	Meaning/Reason
SUTAN OTAMO (SUTAN_O)	DIRECTOR OF QC DIVISION 2	21 Feb 2022, 09:00:56 AM	Approved
YAOWAPA SUVATHI (YAOWAPA_S)	DIRECTOR OF QC DIVISION 1	21 Feb 2022, 03:18:13 PM	Approved
NOPPAWAN ANGKULSANSANEE (NOPPAWAN_A)	DIRECTOR OF COMP Q SYS DIV. 2	21 Feb 2022, 05:33:45 PM	Approved
PORNRAPEE PHONGPHAW (PORNRAPEE_P)	DIRECTOR OF VALIDATION DIV.	22 Feb 2022, 11:51:44 AM	Approved
SOPIN BOSITTHIPICHET (SOPIN_B)	DIRECTOR OF COMP Q SYS DIV. 1	02 Mar 2022, 07:23:22 PM	Approved

#### Step 3. Approver

Name/Signature	Title	Date	Meaning/Reason
ANCHERN TANTISUNGVARAKOON (ANCHERN_T)	QA MANAGER	03 Mar 2022, 12:55:20 PM	Approved

#### Step 4. Notify

Name/Signature	Title	Date	Meaning/Reason
PHAWITA SUWARAK (PHAWITA_S)	QA IT&Doc	03 Mar 2022, 12:55:20 PM	Email Sent
CHETNIPHAT PONGSRITHONG (CHETNIPHAT_P)	QA-IT&Doc	03 Mar 2022, 12:55:20 PM	Email Sent
DONNAPA PUEKWATTANA (DONNAPA_P)	QA-IT&Doc	03 Mar 2022, 12:55:20 PM	Email Sent
NATTAPORN RUANSON (NATTAPORN_R)	HEAD OF IT QUALITY AND DOC SEC	03 Mar 2022, 12:55:20 PM	Email Sent
SUTHASINEE PENGSRI (SUTHASINEE_P)	QA IT&Doc	03 Mar 2022, 12:55:20 PM	Email Sent
TASSANA PRAWISAT (TASSANA_P)	QA IT&Doc	03 Mar 2022, 12:55:20 PM	Email Sent
WEERAYA KONGPAKPIEN (WEERAYA_K)	QA IT&Doc	03 Mar 2022, 12:55:20 PM	Email Sent



QA IT&Doc

03 Mar 2022, 12:55:20 PM

**Email Sent** 

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