

TABLE OF CONTENTS

LIST OF TABLESvi
LIST OF ABBREVIATIONS AND ACRONYMSvii
INTERAGENCY COORDINATING COMMITTEE ON THE VALIDATION OF
ALTERNATIVE METHODS –AGENCY REPRESENTATIVES.....viii
ACKNOWLEDGEMENTSix
PREFACExiii
EXECUTIVE SUMMARYxvii

1.0 INTRODUCTION 1
2.0 THE BCOP TEST METHOD 5
 2.1 BCOP Technical Summary 5
 2.1.1 Test Method Description 5
 2.1.2 Validation Database..... 6
 2.1.3 Test Method Accuracy..... 6
 2.1.4 Test Method Reliability (Inter- and Intra-Laboratory
 Reproducibility)..... 8
 2.2 ICCVAM Recommendations for the BCOP Test Method 9
 2.2.1 Use of the BCOP Test Method..... 9
 2.2.2 BCOP Test Method Protocol 10
 2.2.3 Optimization of the Current BCOP Test Method Protocol..... 10

3.0 THE ICE TEST METHOD..... 13
 3.1 ICE Technical Summary 13
 3.1.1 Test Method Description 13
 3.1.2 Validation Database..... 13
 3.1.3 Test Method Accuracy..... 14
 3.1.4 Test Method Reliability (Inter- and Intra-Laboratory
 Reproducibility)..... 16
 3.2 ICCVAM Recommendations for the ICE Test Method..... 16
 3.2.1 Use of the ICE Test Method 16
 3.2.2 ICE Test Method Protocol 17
 3.2.3 Optimization of the Current ICE Test Method Protocol 18

4.0 THE IRE TEST METHOD..... 19
 4.1 IRE Technical Summary 19
 4.1.1 Test Method Description 19
 4.1.2 Validation Database..... 19
 4.1.3 Test Method Accuracy..... 20
 4.1.4 Test Method Reliability (Inter- and Intra-Laboratory
 Reproducibility)..... 20
 4.2 ICCVAM Recommendations for the IRE Test Method..... 22
 4.2.1 Use of the IRE Test Method 22
 4.2.2 IRE Test Method Protocol 23
 4.2.3 Optimization of the Current IRE Test Method Protocol 23

5.0	THE HET-CAM TEST METHOD	25
5.1	HET-CAM Technical Summary	25
5.1.1	Test Method Description	25
5.1.2	Validation Database.....	25
5.1.3	Test Method Accuracy.....	26
5.1.4	Test Method Reliability (Inter- and Intra-Laboratory Reproducibility).....	28
5.2	ICCVAM Recommendations for the HET-CAM Test Method	30
5.2.1	Use of the HET-CAM Test Method	30
5.2.2	HET-CAM Test Method Protocol.....	30
5.2.3	Optimization of the Current HET-CAM Test Method Protocol.....	31
6.0	COMPARISON OF PERFORMANCE CHARACTERISTICS AND GENERAL RECOMMENDATIONS FOR FOUR EVALUATED <i>IN</i> <i>VITRO</i> TEST METHODS.....	33
7.0	ICCVAM RECOMMENDATIONS ON SUBSTANCES FOR VALIDATION OF <i>IN VITRO</i> OCULAR TOXICITY TEST METHODS FOR THE EVALUATION OF OCULAR CORROSIVES AND SEVERE IRRITANTS.....	37
8.0	REFERENCES	39
APPENDIX A	EXPERT PANEL REPORTS	A-1
A1	Expert Panel Report: Evaluation of the Current Validation Status of <i>In Vitro</i> Test Methods for Identifying Ocular Corrosives and Severe Irritants	A-3
A2	Expert Panel Report: Evaluation of the Current Validation Status of <i>In Vitro</i> Test Methods for Identifying Ocular Corrosives and Severe Irritants – Addendum	A-135
A3	Summary Minutes from Expert Panel Meeting on January 11-12, 2005..	A-153
A4	Summary Minutes from Expert Panel Teleconference on September 19, 2005.....	A-221
APPENDIX B	COMPARISON OF PERFORMANCE CHARACTERISTICS OF FOUR <i>IN VITRO</i> TEST METHODS FOR THE IDENTIFICATION OF OCULAR CORROSIVES OR SEVERE IRRITANTS	B-1
B1	Comparison of Performance Characteristics of Four <i>In Vitro</i> Test Methods for Identification of GHS Ocular Corrosives or Severe Irritants	B-3
B2	Comparison of Performance Characteristics of Four <i>In Vitro</i> Test Methods for Identification of EPA Ocular Corrosives or Severe Irritants	B-7
B3	Comparison of Performance Characteristics of Four <i>In Vitro</i> Test Methods for Identification of EU Ocular Corrosives or Severe Irritants....	B-11
APPENDIX C	RELEVANT FEDERAL OCULAR IRRITATION REGULATIONS AND TESTING GUIDELINES	C-1
C1	Table of Relevant Ocular Irritation Regulations.....	C-3
C2	16CFR1500.42: Test for Eye Irritants.....	C-9
C3	29CFR1910.1200: Hazard Communication	C-13

C4	Health Effects Test Guidelines OPPTS 870.2400: Acute Eye Irritation	C-39
APPENDIX D	ICCVAM RECOMMENDED BCOP TEST METHOD PROTOCOL.....	D-1
APPENDIX E	ICCVAM RECOMMENDED ICE TEST METHOD PROTOCOL.....	E-1
APPENDIX F	ICCVAM RECOMMENDED IRE TEST METHOD PROTOCOL.....	F-1
APPENDIX G	ICCVAM RECOMMENDED HET-CAM TEST METHOD PROTOCOL.....	G-1
APPENDIX H	ICCVAM RECOMMENDED REFERENCE SUBSTANCES LIST	H-1
APPENDIX I	FEDERAL REGISTER NOTICES AND PUBLIC COMMENTS.....	I-1
I1	<i>Federal Register</i> Notices.....	I-3
I2	ICCVAM Consideration of Public Comments Received in Response to <i>Federal Register</i> Notices.....	I-27