

## TABLE OF CONTENTS

FOREWORD .....	1
1. EXECUTIVE SUMMARY .....	4
2. IDENTITY AND PHYSICAL/CHEMICAL PROPERTIES .....	5
3. ANALYTICAL METHODS .....	5
4. SOURCES OF HUMAN AND ENVIRONMENTAL EXPOSURE .....	6
5. ENVIRONMENTAL TRANSPORT, DISTRIBUTION, AND TRANSFORMATION .....	7
6. ENVIRONMENTAL LEVELS AND HUMAN EXPOSURE .....	9
6.1 Environmental levels .....	9
6.2 Human exposure .....	10
7. COMPARATIVE KINETICS AND METABOLISM IN LABORATORY ANIMALS AND HUMANS .....	11
8. EFFECTS ON LABORATORY MAMMALS AND <i>IN VITRO</i> TEST SYSTEMS .....	13
8.1 Single exposure .....	13
8.2 Irritation and sensitization .....	13
8.3 Short-term exposure .....	13
8.4 Medium-term exposure .....	13
8.5 Long-term exposure and carcinogenicity .....	15
8.6 Genotoxicity and related end-points .....	16
8.7 Reproductive toxicity .....	17
8.8 Immunological and neurological effects .....	17
9. EFFECTS ON HUMANS .....	17
9.1 Case reports .....	17
9.2 Epidemiological studies .....	18
10. EFFECTS ON OTHER ORGANISMS IN THE LABORATORY AND FIELD .....	21
10.1 Aquatic environment .....	21
10.2 Terrestrial environment .....	22
11. EFFECTS EVALUATION .....	22
11.1 Evaluation of health effects .....	22
11.1.1 Hazard identification and dose-response assessment .....	22
11.1.2 Criteria for setting tolerable intakes/concentrations or guidance values for barium and barium compounds .....	24
11.1.3 Sample risk characterization .....	25
11.1.3.1 Ingestion .....	25
11.1.3.2 Occupational (barium sulfate) .....	25
11.1.4 Uncertainties in the evaluation of health risk .....	25
11.2 Evaluation of environmental effects .....	26

12. PREVIOUS EVALUATIONS BY INTERNATIONAL BODIES .....	26
REFERENCES .....	27
APPENDIX 1 — SOURCE DOCUMENTS .....	32
APPENDIX 2 — CICAD PEER REVIEW .....	33
APPENDIX 3 — CICAD FINAL REVIEW BOARD .....	33
INTERNATIONAL CHEMICAL SAFETY CARDS .....	35
RÉSUMÉ D'ORIENTATION .....	49
RESUMEN DE ORIENTACIÓN .....	51