CONTENTS

1. INTRODUCTION	
2. PRE-TEST DOCUMENTATION	2
3. SELECTING THE APPROACH AND TEST CONDITIONS	7
3.1 Introduction	
3.2 Approach	
3.3 Test conditions	9
4. TEST EQUIPMENT	10
4.1 Introduction	10
4.2 Datalogger	11
4.3 Temperature Sensors	11
4.4 Simulants	12
5. CALIBRATION	13
6. HEAT DISTRIBUTION EXPERIMENT	13
6.1 Introduction	13
6.2 Selection of equipment6.2.1. Batch Static Retorts6.2.2. Batch Static Scramble Packed (crates or crateless)6.2.3. Batch Rotary Retorts	13 14 14 14
6.3 Loading the retort and positioning of temperature sensors 6.3.1. Temperature distribution 6.3.2. Heating rate (f_h) , lag factor (j_h) and lethality (F_0) distribution	15 16 16
6.4 Conducting the test 6.4.1. Temperature distribution 6.4.2. Heating rate (f _h), lag factor (j _h) and lethality (F ₀) distribution	17 17 17
6.5 Records generated during the test	18
7. APPROACHES TO INTERPRETATION OF HEAT DISTRIBUTION DATA	18
7.1 Temperature distribution study	18

7.1.1. Temperature distribution7.1.2. Temperature stability7.1.3. Existing guidelines to assess the performance of a retort	18 19 20
7.2 Heating rate (f_h) and lag factor (j_h) distribution study	21
7.3 Lethality (F,) distribution study	22
ABBREVIATIONS	24
GLOSSARY	24
BIBLIOGRAPHY	29
APPENDIX 1	
POTENTIAL INTERFERENCE OF DIFFERENT FACTORS	31
ON THE HEAT DISTRIBUTION OF THE RETORT	
APPENDIX 2	
DESCRIPTION AND COMPARISON OF TEMPERATURE SENSORS	43
APPENDIX 3	
CALIBRATION OF TEMPERATURE SENSORS AND SIMULANTS	47