## **CONTENTS**

				Page no.	
1.	SCO	PE ANI	D LIMITATIONS	1	
2.	WHAT IS SHELF-LIFE?				
	2.1	2.1 Definition of shelf-life			
	2.2				
	2.3				
	2.4	Micro	obiological shelf-life evaluation testing and challenge testing	3	
		2.4.1		3	
		2.4.2	Challenge testing	4	
3.	THE SHELF-LIFE EVALUATION SEQUENCE			5	
	3.1	Phase I - Kitchen/Pilot scale flow chart		7	
		3.1.1	Product concept	8	
		3.1.2	Define the product and process characteristics	8	
		3.1.3	Produce samples in the test kitchen or pilot plant	9	
		3.1.4	Preliminary shelf-life assessments	9	
		3.1.5	Is the target shelf-life achieved?	9	
	3.2	Phase	11		
		3.2.1	Consider scale-up issues	12	
		3.2.2	Complete a HACCP analysis	12	
		3.2.3	Shelf-life evaluation	12	
			3.2.3.1 Choose appropriate storage conditions	13	
			3.2.3.2 Select sampling frequency	15	
			3.2.3.3 Select which tests to conduct	15	
		3.2.4	Interpretation of shelf-life evaluation data	16	
			3.2.4.1 What is the maximum safe shelf-life?	16	
			3.2.4.2 What is the maximum quality shelf-life?	17	
			3.2.4.3 Do the maximum safe and quality shelf-lives		
			meet the target shelf-life?	17	
		3.2.5	Set the working shelf-life	17	
		3.2.6	Laboratory testing	18	

	3.3		e 111 - Full-scale production flow chart	19		
			Verify HACCP plan Assess shelf-life variability	19 20		
			Shelf-life or process review	20		
		3.3.3	Shell-life of process review	20		
4.	ОТН	ER CC	CFRA PUBLICATIONS RELATED TO GUIDELINE NO. 46	21		
	4.1	CCF	RA Publications	21		
	4.2	CCFI	RA PC Software	21		
5.	REFERENCES					
APPENDICES						
APP	ENDL	X I -	UK and EU chilled foods legislation relating to shelf-life	27		
APP	ENDI	X II -	Tables of information on microbial growth criteria and suitable tests for microbial and chemical spoilage	31		
APPENDIX III - Rationale for shelf-life testing protocol						
APP	ENDL	X IV -	Factors affecting shelf-life	49		
APP	ENDL	xv-	Predictive models for microbiological shelf-life estimation	61		