Contents

1.	Intr	oduction				
2.	General considerations					
	2.1	Modification of the agenda				
	2.2	Principles governing the toxicological evaluation of compounds				
		on the agenda	2			
		2.2.1 Prediction of metabolism of flavouring agents into				
		innocuous products	2			
	2.2	2.2.2 Literature surveys	4			
	2.3	Principles governing intake assessments Principles governing the establishment and revision of	4			
	2.4	specifications	12			
		2.4.1 Specifications and the ADI	12			
		2.4.2 Microbiological criteria in specifications monographs for	12			
		food additives	12			
		2.4.3 Specifications for flavouring agents	13			
		2.4.4 Specifications for vitamins and minerals	14			
		2.4.5 Enzyme preparations derived from genetically modified				
		microorganisms	14			
		2.4.6 Limit test for heavy metals	17			
3.	Specific food additives					
	3.1	Enzyme preparations	17 17			
		3.1.1 α-Acetolactate decarboxylase	17			
		3.1.2 Maltogenic amylase	18			
	3.2	Flavouring agents	18			
		3.2.1 trans-Anethole	18			
		3.2.2 Furfural	22			
		3.2.3 Menthol	25			
	3.3	Food colours	26			
		3.3.1 Curcumin	26			
		3.3.2 Riboflavin from genetically modified <i>Bacillus subtilis</i>	28			
	3.4	9 9	29			
	3.5	Preservatives: sulfur dioxide and sulfites	30			
	3.6	Sweetening agent: stevioside	35			
	3.7	Thickening agents	37			
		3.7.1 Carrageenan3.7.2 Processed <i>Eucheuma</i> seaweed	37			
			40			
	3.8	3.7.3 Sodium carboxymethyl cellulose, enzymatically hydrolysed Miscellaneous substances	42 43			
	0.0	3.8.1 γ-Cyclodextrin	43			
		3.8.2 Glucono-δ-lactone and the calcium, magnesium,	40			
		potassium and sodium salts of gluconic acid	46			
		3.8.3 Polyglycitol syrup	47			
4.	Sub	stances evaluated using the Procedure for the Safety Evaluation				
→.		of Flavouring Agents				
	4.1	General aspects of metabolism	50			
		The state of the s				

		4.1.1 Hydrolysis of esters	51	
		4.1.2 Oxidation of alcohols and aldehydes	52	
		4.1.3 Conjugation of alcohols	54	
		4.1.4 Reduction of ketones	54	
		4.1.5 Reduction of double bonds	55	
		4.1.6 Oxidation of side-chains	56	
		4.1.7 Oxidation of alicyclics	58	
		4.1.8 Conjugation with glutathione	58	
	4.2	Saturated aliphatic acyclic secondary alcohols, ketones and		
	٦.८	related saturated and unsaturated esters	59	
	4.3	Linear and branched-chain aliphatic unsaturated, unconjugated		
	4.5	alcohols, aldehydes, acids and related esters	68	
	4.4	Aliphatic acyclic and alicyclic terpenoid tertiary alcohols and		
	4.4	structurally related substances	79	
	4.5	Carvone and structurally related substances	90	
		Ionones and structurally related substances	96	
	4.6	Aliphatic acyclic and alicyclic α-diketones and related		
	4.7	α-hydroxyketones	103	
	4.0	Substances structurally related to menthol	111	
	4.8	Substances structurally related to mention		
5.	Into	ke assessments of specific food additives	118	
5.	5.1	Benzoates	118	
	5.2		123	
	5.3	Butylated hydroxytoluene (BHT)	126	
	5.4	Sulfites	128	
	5.5	tert-Butylhydroquinone (TBHQ)	132	
	5.5	tert-butylinydroddinone (15114)		
6.	Rev	rision of certain specifications	135	
_	-	us made	137	
7.	Futt	ure work	107	
8.	Boo	commendations	137	
Ο.	nec	ommendations		
Ac	know	vledgements	139	
, .0		no agomente		
References				
	nex			
Re	ports	and other documents resulting from previous meetings of the		
Joi	nt F	AO/WHO Expert Committee on Food Additives	140	
۸n	nex	o de la companya del companya de la companya del companya de la co		
		able Daily Intakes, other toxicological information, and information		
	-		147	
OH	spec	cifications		
	nex			
Fu	rther	toxicological studies and other information required or desired	160	
Δη	nex	Λ		
Fo	od c	ategorization system for the General Standard for Food Additives	163	
. 0	54 0	w.o.go.,		