

## Food Safety III:

### Food Colours and Aroma

Chiron has built up a strong track record of supplying new reference standards during the past 25 years of operation. We are now proud to announce our offer of Food Colour and Food Aroma reference standard.



#### Food Colours

Carotenoids, Chlorophylls, Synthetic colours



#### Food Aroma

Taste and Flavours

The basis of a good analytical method is the availability of appropriate standards of defined purity and concentration.

Our mission is to market highly purified calibrants in crystalline as well as standardized solutions for chemical analysis, including internal standards.

Your benefits using our standards include:

- ◇ Fast turnover time due to excellent service
- ◇ Guaranteed high and consistent quality
- ◇ Sufficient capacity to serve the market, and bulk quantities available on request
- ◇ Custom solutions on request.

Reference materials (RM) play an important role as they build the link between the measurement result in the laboratory and international recognized standards in the traceability chain. Our standards are made according to the general requirements of ISO 17025 and ISO guides 30-35.

#### Other relevant food analysis literature:

**Food Safety I (BMF 29): Natural Toxins, Mycotoxins, Plant toxins and Marine toxins**

**Food Safety II (BMF 30): Food Impurities and Contaminants**

**Food Safety III (BMF 31): Food Colours and Flavours (Aroma and Taste)**

**BMF 32 : Plasticizers, Phthalates and Adipates**

**BMF 20: PCFs including PFOS and PFOA**

**BMF 14: PCBs**

**BMF 15: PBDEs**

**Pesticides: See the Chiron 2008 catalogue ("The Biomarker Catalogue - The Collection of Reference Standards 2008"): Pages 367-372.**

BMF = Biomarker Focus

## Food Aroma (Taste and Flavours)



	Off-flavour compounds	
3886.8-100-ME	Skatole	3-Methylindole
3887.11-100-ME	2-Methylisoboreneol	
3888.12-100-ME	(+/-)-Geosmine	
3889.7-100-ME	2,4,6-Trichloroanisole	
3890.4-100-ME	Methional	3-Methylthiopropionaldehyde
3891.15-100-ME	Nootkatone	
3892.10-100-ME	Carvone	
3893.5-100-ME	3-Methyl-2-buten-1-thiol	
	<b>Thiazoles</b>	
3894.5-100-ME	2-Acetylthiazole	
3895.5-100-ME	2-Acetyl-2-thiazoline	
3896.7-100-ME	Benzothiazole	
3897.10-100-ME	2-Isobutylthiazole	

All delivered as 100ug/mL in Methanol.

	Pyrazines	
	<b>Natural pyrazines</b>	
8830.6-K-IO	Natural dimethylpyrazines (2,5 -and 2,6)-	
8831-K-IO	Natural alkyl pyrazines	
8832.8-K-IO	Natural 2,3,5,6-tetramethylpyrazines	
	<b>Alkylpyrazines</b>	
8874.4-K-IO	Pyrazine	
8843.10-K-IO	2-Butyl-3,5-dimethylpyrazine and 2-butyl-3,5-dimethylpyrazine, Isomer mixture	
8837.9-K-IO	2-Butyl-3-methylpyrazine	
8838.8-K-IO	2- <i>t</i> -Butylpyrazine	
8836.8-K-IO	2,3-Diethyl-5-methylpyrazine	FEMA No. 935E
8835.8-K-IO	2,3-Diethylpyrazine	FEMA No. 3136
3771.6-K-IO	2,3-Dimethylpyrazine	FEMA No. 3271
3772.6-K-IO	2,5-Dimethylpyrazine, Research grade	FEMA No. 3272
8833.6-K-IO	2,5-Dimethylpyrazine, Flavour grade	FEMA No. 3273
3773.6-K-IO	2,6-Dimethylpyrazine	FEMA No. 3273
3774.8-K-IO	2-Ethyl-3,5-dimethylpyrazine	
3775.8-K-IO	2-Ethyl-3,6-dimethylpyrazine	
8765.8-K-IO	2-Ethyl-3,(5/6)-dimethylpyrazine, Isomer mixture	
3777.7-K-IO	2-Ethyl-3-methylpyrazine	FEMA No. 3155
3778.7-K-IO	2-Ethyl-5-methylpyrazine	FEMA No. 3154
8834.7-K-IO	2-Ethyl-5-methyl- and 2-Ethyl-6-methylpyrazine, Isomer mixture	FEMA No. 3154&3919
3779.6-K-IO	2-Ethylpyrazine	FEMA No. 3281
3781.9-K-IO	2-Isobutyl-3-methylpyrazine	FEMA No. 3133
8844.10-K-IO	2-Isobutyl-3,5-dimethylpyrazine and 2-isobutyl-3,6-dimethylpyrazine, Isomer mixture	
8839.8-K-IO	2-Isobutylpyrazine	
8845.7-K-IO	2-Isopropylpyrazine	FEMA No. 3940
3785.5-K-IO	2-Methylpyrazine	FEMA No. 3309
8840.9-K-IO	2-Propyl-3,5-dimethylpyrazine and 2-Propyl-3,6-dimethylpyrazine, Isomer mixture	
8841.8-K-IO	2-Propyl-3-methylpyrazine	
8842.7-K-IO	2- <i>n</i> -Propylpyrazine	FEMA No. 3961
3787.7-K-IO	2,3,5-Trimethylpyrazine	FEMA No. 3244
3786.8-K-IO	2,3,5,6-Tetramethylpyrazine	FEMA No. 3237

	<b>Methoxy/Alkoxy pyrazines</b>	
3770.9-K-IO	2-sec-Butyl-3-methoxypyrazine	
8846.7-K-IO	2-Ethoxy-3-methylpyrazine	
8847.8-K-IO	2-Ethoxy-3-ethylpyrazine	
8848.9-K-IO	2-Ethoxy-3-isopropylpyrazine	
3776.7-K-IO	2-Ethyl-3-methoxypyrazine	
3780.9-K-IO	2-Isobutyl-3-methoxypyrazine	
8849.8-K-IO	2-Isopropoxy-3(6)-methylpyrazine, Isomer mixture	
8850.9-K-IO	2-Methoxy-3-isobutylpyrazine	FEMA No. 3132
8851.9-K-IO	2-Methoxy-3-sec-butylpyrazine	FEMA No. 3433
3782.8-K-IO	2-Methoxy-3-isopropylpyrazine	FEMA No. 3358
8856.7-K-IO	2-Methoxy-3-ethylpyrazine, 85% (mix with 2-methoxy-3 and 5-methylp.)	FEMA No. 3280
8857.7-K-IO	2-Methoxy-3-ethylpyrazine	FEMA No. 3280
3783.6-K-IO	2-Methoxy-3-methylpyrazine	
8875.8-K-IO	2-Methoxy-3-n-propylpyrazine	
3784.5-K-IO	2-Methoxypyrazine	
8852.8-K-IO	2-n-Propoxy-6-methylpyrazine	
8853.8-K-IO	2-n-Propoxy-3(5)-methylpyrazine, Isomer mixture	
8854.7-K-IO	2-Ethoxy-3-methyl- and 2-ethoxy-5-methylpyrazine, Isomer mixture	FEMA No. 3569
8855.6-K-IO	2-Methoxy-3-methyl- and 2-methoxy-5-methylpyrazine, Isomer mixture	FEMA No. 3183
	<b>Methylthio pyrazines</b>	
8858.-K-IO	2-Methyl-2,5(6)-(furfurylthio)pyrazine	FEMA No. 3189
8859.7-K-IO	2-Methylthio-3-ethylpyrazine	
8860.8-K-IO	2-Methylthio-3-isopropylpyrazine	
8861.6-K-IO	2-Methylthio-3-methylpyrazine (single isomer)	
8862.6-K-IO	2-Methylthio-3-methyl- and 2-methylthio-5-methylpyrazine, Isomer mixture	FEMA No. 3208
8863.5-K-IO	2-Methylthiopyrazine	FEMA No. 3231
	<b>Quinoxalines (Benzopyrazines)</b>	
8865.11-K-IO	2-Methylquinoxaline	
8866.11-K-IO	5-Methylquinoxaline	FEMA No. 3203
8867.11-K-IO	6-Methylquinoxaline	
8869.10-K-IO	5H-5-Methyl-6,7-dihydrocyclopentapyrazine	FEMA No. 3306
8864.10-K-IO	Quinoxaline	
8868.10-K-IO	5,6,7,8-Tetrahydroquinoxaline	Cyclohexapyrazine, FEMA No. 3321
	<b>Acetylpyrazines</b>	
8870.8-K-IO	2-Acetyl-3-ethylpyrazine	FEMA No. 3250
8871.7-K-IO	2-Acetyl-3-methylpyrazine	FEMA No. 3964
8872.6-K-IO	2-Acetylpyrazine	FEMA No. 3126
8873.8-K-IO	2-Acetyl-3,5- and 2-acetyl-3,6-dimethylpyrazine	FEMA No. 3327

All delivered as 1000ug/mL in Isooctane.

	<b>Phenols</b>	
1358.7-1G	<i>p-Cresol</i>	1G neat
1411.8-1G	4-Ethylphenol	1G neat
2372.7-K-IO	Guaiacol	1000ug/mL in Isooctane
3898.8-K-MX	4-Vinylphenol	1000ug/mL in mix of solvents
3899.8-K-IO	2-Methoxy-4-vinylphenol	1000ug/mL in Isooctane
3900.8-1ML	Eugenol	1ML neat
2370.8-K-IO	Vanillin	1000ug/mL in Isooctane
	<b>Quassins (bitter taste)</b>	
8800.22-100MG	Quassin, mixture of isomers w/Neoquassin and Isoquassin	100MG neat

	<b>Caffeine</b>		
2517.8-K-ME	Caffeine		1000ug/mL in Methanol
2517.8-500MG	Caffeine		500MG neat
2518.7-100-ME	Theophylline	<i>Imp. A (EP)</i>	100ug/mL in Methanol
2518.7-500MG	Theophylline	<i>Imp. A (EP)</i>	500MG neat
2700.8-K-ME	Isocaffeine (1,3,9-Trimethylxanthine)	<i>Imp. C (EP)</i>	1000ug/mL in Methanol
2700.8-10MG	Isocaffeine (1,3,9-Trimethylxanthine)	<i>Imp. C (EP)</i>	10MG neat
2700.8-25MG	Isocaffeine (1,3,9-Trimethylxanthine)	<i>Imp. C (EP)</i>	25MG neat
2540.7-K-ME	Paraxanthine		1000ug/mL in Methanol
2540.7-10MG	Paraxanthine		10MG neat
2540.7-25MG	Paraxanthine		25MG neat
2540.7-50MG	Paraxanthine		50MG neat

## Food Colours



	<b>Food Colours</b>		
	<b>Carotenoids</b>		
3903.30-5MG	8'-Apo-8-β-caroten-8'-al	E 160e	5MG neat
3902.40-5MG	Astaxanthin		5MG neat
3904.25-5MG	Bixin	E 160b	5MG neat
3901.40-5MG	Canthaxanthin	E 161 g	5MG neat
2641.40-10MG	ββ-Carotene	E 160a	10MG neat
8102.40-1MG	Capxanthin		1MG neat
3655.20-5MG	<i>trans-Crocetina</i>		5MG neat
3927.40-5MG	Lutein		5MG neat
3925.40-5MG	Lycopene	E160d	5MG neat
3654.40-1MG	Zeaxanthin		1MG neat
	<b>Chlorophylls</b>		
3928.55-1G	Chlorophylls, Na salt	E 140	1G neat
3593.55-1MG	Chlorophyll A		1MG neat
3594.55-1MG	Chlorophyll B		1MG neat
	<b>Other food colours</b>		
3905.16-1G	Tartrazine (E102)	C.I.19140; Acid yellow 23	1G neat
3906.17-1G	Riboflavin (E101)	Vitamin B2: Lactoflavine	1G neat
3907.21-1G	Curcumin (E 100)		1G neat
3908.16-1G	Sunset Yellow FCF (E 110)	C.I.15985, Yellow No.6, Food yellow 3	1G neat
3909.20-1G	Amaranth, Redx No 2 (E 123)	C.I.16185, Acid red 27	1G neat
3910.22-1G	Carmine, Natural red 4 (E 120)	C.I.75470	1G neat
3911.18-1G	Red 2G, Acid red 1 (E 128)		1G neat
3912.27-1G	Patent Blue V, Ca salt (E 131)		1G neat
8719.27-250mg	Patent Blue V, Na salt		250MG neat
8349.27-100MG	Patent Blue V, Acid blue	C.I.42045	100MG neat
8346.27-1G	Patent Blue VF	C.I.42045	1G neat

