CLAP GCMS RRF Values

RST Name: **Chemicals List for Analytical Performance (CLAP)**

Reference Number: **RST24MC05.01**

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Contact: **RST_CDRH@fda.hhs.gov**

Code	Trivial Name	CAS #	RRF from GCMS (TIC) (Positive Ion Detection Mode)		
			5 µg/mL	10 µg/mL	20 µg/mL
RM1	Irganox 1010	6683-19-8	n.d.	n.d.	n.d.
RM2	Irganox 1076	2082-79-3	0.326	0.434	0.336
RM3	Irgafos 168	31570-04-4	0.414	0.393	0.281
RM4	2,6-Di-t-butyl-4- methylphenol	128-37-0	1.828	2.143	1.810
RM5	**2,4-Di-t-butyl phenol**	96-76-4	**1.000**	**1.000**	**1.000**
RM6	2,4-Dimethylphenol	105-67-9	0.710	0.377	0.424
RM7	3-tert-Butyl-4-hydroxyanisole	25013-16-5	0.606	0.506	0.583
RM8	Di-(2-ethylhexyl)phthalate	117-81-7	0.823	0.824	0.838
RM9	Dibutylphthalate	84-74-2	0.713	0.744	0.822
RM10	Diphenyl phthalate	84-62-8	0.180	0.437	0.676
RM11	Benzyl butyl phthalate	85-68-7	0.364	0.383	0.476
RM12	Tris (2-ethylhexyl) trimellitate	3319-31-1	0.503	0.470	0.525
RM13	Caprolactam	105-60-2	0.214	0.289	0.413
RM14	Bisphenol A	80-05-7	0.066	0.241	0.314
RM15	Erucamide	112-84-5	0.143	0.165	0.086

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			5 µg/mL	10 µg/mL	20 µg/mL
RM16	Oleamide	301-02-0	0.033	0.035	0.040
RM17	Butyl stearate	123-95-5	0.295	0.288	0.275
RM18	Tinuvin 320	3846-71-7	0.182	0.575	0.723
RM19	D4 siloxane	556-67-2	1.262	1.828	1.537
RM20	D6 Siloxane	540-97-6	1.076	0.773	1.134
RM21	Diisobutyl adipate	141-04-8	0.663	0.609	0.625
RM22	Diisooctyl azelate	26544-17-2	n.d.	n.d.	n.d.
RM23	Dibutyl sebacate	109-43-3	0.377	0.393	0.451
RM24	Heptylnonyl Adipate	68515-75-3	0.014	0.022	0.023
RM25	Dibenzylamine	103-49-1	0.654	0.741	0.896
RM26	Benzoic acid	65-85-0	below DL	below DL	0.035
RM27	2-Ethylhexanoic acid	149-57-5	0.084	0.121	0.166
RM28	Bis(4-chlorophenyl) sulfone	80-07-9	0.707	0.733	0.725
RM29	3,5-Di-tert-butyl-4-hydroxybenzyl alcohol	88-26-6	0.297	0.282	0.310
RM30	1,3-Di-tert-butylbenzene	1014-60-4	2.551	2.006	1.653
RM31	Tris(2,4-di-tert-butylphenyl)phosphate	95906-11-9	0.206	0.172	0.175
RM32	Palmitic acid	57-10-3	n.d.	n.d.	n.d.
RM33	TBBS	95-31-8	0.457	0.442	0.580
RM34	Ditolylguanidine	97-39-2	below DL	below DL	below DL
RM35	IPPD	101-72-4	0.176	0.201	0.214
RM37	Triclosan	3380-34-5	0.101	0.136	0.150
RM40	Vitamin E	10191-41-0	0.121	0.144	0.142
RM41	Cyanox 425	88-24-4	0.208	0.297	0.378
RM44	Irganox 1035	41484-35-9	0.099	0.152	0.022

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RM47	Lauramide DEA	120-40-1	n.d.	n.d.	n.d.
RM48	Monostearin	123-94-4	n.d.	n.d.	n.d.
RM49	Benzothiazole	95-16-9	0.863	0.891	0.857
RM50	BDMA	103-83-3	1.530	1.467	1.358
RM51	4-tert-Butylphenol	98-54-4	0.687	0.724	0.737
RM52	4-tert-Amylphenol	80-46-6	0.615	0.527	0.606
RM53	4,4'-Methylenedianiline	101-77-9	0.142	0.243	0.377
RM55	CBS	95-33-0	0.104	0.107	0.149
RM56	2-Mercaptobenzothiazole	149-30-4	below DL	below DL	below DL
RM57	Stearic Acid	57-11-4	below DL	below DL	below DL
RM58	p-Terphenyl	92-94-4	1.508	1.980	1.768
RM59	Ethylene distearamide (hexane)	110-30-5	n.d.	n.d.	n.d.
RM60	3,4-Dimethylbenzaldehyde	5973-71-7	0.734	0.866	0.967
RM61	Pivalanilide	6625-74-7	0.632	0.661	0.690
RM63	Triethyl phosphate	78-40-0	0.274	0.297	0.355
RM64	Triacetin	102-76-1	0.302	0.337	0.383
RM65	Triethyl citrate	77-93-0	0.106	0.145	0.205
RM66	TXIB	6846-50-0	0.708	0.674	0.668
RM67	Methyl oleate	112-62-9	0.377	0.378	0.396
RM68	Isopropyl palmitate	142-91-6	0.468	0.451	0.616
RM69	Diphenyl terephthalate	1539-04-4	0.140	0.259	0.245
RM70	DEHS	7313-54-4	n.d.	n.d.	n.d.
RM71	Tributyl citrate	77-94-1	0.022	0.099	0.163
RM72	Diisooctyl phthalate	27554-26-3	below DL	below DL	below DL

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RM73	DOTP	6422-86-2	0.266	0.292	0.265
RM74	Acetyltributyl citrate	77-90-7	0.333	0.356	0.347
RM75	Dioctyl azelate	2064-80-4	0.042	0.038	0.037
RM76	Bis(2-ethylhexyl)sebacate	122-62-3	0.175	0.286	0.238
RM77	Diisononyl phthalate	28553-12-0	below DL	below DL	below DL
RM79	Diisodecyl adipate	27178-16-1	n.d.	n.d.	n.d.
RM80	Dicyclohexyl phthalate	84-61-7	0.510	0.527	0.443
RM83	di(2-ethylhexyl) hexahydrophthalate	84-71-9	0.277	0.294	0.274
RM85	Phthalic anhydride	85-44-9	below DL	below DL	below DL
RM86	Benzotriazole	95-14-7	below DL	below DL	below DL
RM87	2-(benzo[d]thiazol-2-yl)phenol	3411-95-8	0.090	0.140	0.163
RM88	Tinuvin 326	3896-11-5	0.135	0.142	0.154
RM89	Octabenzone	1843-05-6	0.161	0.233	0.220
RM90	Tinuvin 328	25973-55-1	0.401	0.394	0.285
RM91	Tinuvin 770	52829-07-9	0.296	0.312	0.317
RM92	Benzophenone-1	131-56-6	below DL	below DL	0.035
RM93	Tinuvin P	2440-22-4	0.189	0.220	0.230
RM94	Octrizole	3147-75-9	0.196	0.210	0.166
RM95	Tinuvin 234	70321-86-7	0.255	0.253	0.172
RM96	Ethylene thiourea	96-45-7	below DL	0.031	0.058
RM97	PFDA	335-76-2	n.d.	n.d.	n.d.
RM98	2-Ethylhexanol	104-76-7	0.472	0.547	0.551
RM99	Laurolactam	947-04-6	0.170	0.219	0.250
RM100	Tetradecane	629-59-4	1.339	1.572	1.535
RM101	benzoyl isopropanol	7473-98-5	0.274	0.347	0.400

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RM102	2-Phenyl-2-propanol	617-94-7	0.728	0.737	0.691
RM103	1-Dodecene	112-41-4	1.444	1.765	1.645
RM105	Dilauryl thiodipropionate	123-28-4	n.d.	n.d.	n.d.
RM106	Ethyl carbitol	111-90-0	below DL	0.028	0.088

Note: The relative response factor (RRF) for each chemical in GCMS is established by comparing its signal intensity to that of the internal standard at same concentration. The signal intensity of each chemical was determined by calculating the normalized peak area from the total ion chromatogram (TIC). A chemical highlighted in bold serve as internal standards in positive ion detection mode.

n.d.: not detected.

below DL: below the detection limit, where the peak may be discernible but the signal-to-noise ratio of the sample peak in the TIC was less than 3.

Min	0.014	0.022	0.022
Max	2.551	2.143	1.810