




Sea Marconi Solutions “SM-TCPs” Kit vs Best competitor Kit

Benchmarking between different kits available for Total Chlorine and PCBs Screening in oils

Key Factors	KIT SM TCPs by SEA MARCONI	BEST COMPETITOR KIT
Toxicological information (Section 11 of Material Safety Data Sheets - from Producer)	IARC: NO effects for Carcinogenic Teratogenic or Mutagenic or Harm to the Unborn Child	<ul style="list-style-type: none"> ▪ Carcinogen in accord to NTP e IARC ▪ May cause Teratogenic or Mutagenic effects ▪ May cause Harm to the Unborn Child
Transportation information (Section 14 of Material Safety Data Sheets – from Producer)	Division 8: Corrosive Substances 	<ul style="list-style-type: none"> ▪ Division 4.3: Substances which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities  ▪ Division 8: Corrosive Substances 
Cancerogenic risks	NO	Yes
Teratogenic or Mutagenic risks	NO	Yes
Unborn child risks	NO	Yes
Workers risk	NO	Yes
Enviromental risks	NO	Yes
Test precision vs PCBs determination (according IEC61619 - GC ECD)	YES - HIGH	NO - MORE FALSE POSITIVE RESULTS
Test precision and repeatability at low concentration	YES	NO
One instrument, reagents and methods for high and low concentration of PCBs	YES	NO

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Typical comparison results from UNIDO Project

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Comparison between “SM-TCPs” KIT and PCBs determination (IEC 61619-GC/ECD)

PCBs eq. SM-TCPs KIT [mg/Kg]	PCBs IEC 61619-GC/ECD [mg/Kg]	Δ
6,2	4,19	2,01
18	17,5	0,5
5	7,02	2,02
15	14,75	0,25
< 2	2,07	=
5,35	3,57	1,78
< 2	1,95	=
4,21	3,98	0,23
5,3	3,5	1,8
2	2,11	=
< 2	1,67	=
4,11	3,3	0,81
4,1	4,78	0,68
1,7	2	=



Comparison between PCBs determination¹ and different Kits²

PCBs IEC 61619-GC/ECD [mg/Kg]	PCBs (1242 eq.) “SM-TCPs” KIT [mg/Kg]	Δ (B-A)	Best competitor kit (C)	Δ (C-A)
(A)	(B)			(C-A)
335	668	333	987	652
71	54,8	16,2	153	82
2063	2024	39	3122	1059
150	130,2	19,8	305	155
3	3,66	0,66	41	38
548	527,76	20,24	1437	889
40	46,6	6,6	96,1	56,1
35	34,49	0,51	83,1	48,1



¹ IEC 61619-GC/ECD

² PCBs equivalent (1242 eq.) determination with “SM-TCPs” KIT [mg/Kg] and Best competitor kit