

Quality Control Certificate

Product: **Florisil Column**
Product No.: 13807
Lot No.: **718467**

Storage Recommendations: Store the column at room temperature below 25°C

Description: The Florisil Column is part of a 3- or 4-column setup used for the sample preparation of environmental-, food- / feed- and similar matrices with DEXTech systems from LCTech for the analysis of polychlorinated dibenzo-p-dioxins (PCDD), polychlorinated dibenzofurans (PCDF) and polychlorinated biphenyl (PCB) congeners.

Quality Control Release Inspection and Test Specification

Test Procedure: A solvent blank, spiked with quantification standard has been cleaned on a DEXTech Plus system, spiked with recovery standard, evaporated with the D-EVA and has been quantified with a HRGC/HRMS DFS from Thermo Fisher Scientific at a resolution of R > 10000.

Results Blank Value:

PCDD/F-TEQ:	0,08	pg/column
	(crit: <	0,7 pg/column)
dl-PCB-TEQ:	0,0093	pg/column
	(crit: <	0,05 pg/column)
Sum Total PCB:	3,7	pg/column
	(crit: <	300 pg/column)

Results Recoveries:

PCDD/F	71	to	117	%	(crit: 70	to	120	%)
PCB	91	to	115	%	(crit: 70	to	120	%)

This is to certify that the Florisil Column, Lot 718467, passed the required test specifications and is released for sale.

date: 07.08.2023 sign.: T. Kehmeier

The company LCTech GmbH is certified according to ISO 9001



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Hazards:	<p>NOT FOR HUMAN OR DRUG USE!</p> <p>The Florisil Column is designed and prepared for usage with the Universal/standard & Smart Column and Carbon Column from LCTech and for laboratory use only. This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion, all procedures should be carried out with suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed according to national and regional regulations.</p>
Quality Control:	<p>All ingredients are traceable to certified lots of our supplier. In addition, any ingredient with a new lot will be checked on contamination and efficiency before releasing for production. Monitoring the ongoing production, several columns are chosen at random day for analysis to check on contamination and efficiency.</p>
Quality Management:	<p>This product was produced using a Quality Management System registered to the ISO 9001:2015 (DEKRA)</p>
Documentation / Data Attached:	<p>table 1 & 2: blankvalues of PCDD/F and PCB table 3 & 4: 13C-Recoveries of PCDD/F and PCB</p>
Analytics	<p>This is to certify that the Florisil Column, Lot , passed the required test specifications and is released for sale.</p>
Remarks	<p>Our suppliers maintain the highest standard of quality, however due to the high temperature necessary for several steps in the production, some small charred particles may be visible within a batch of Florisil or filters without any effect on the clean-up.</p>



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Results:

Lockmass check: No significant disturbances, or indicators for contaminations are detected.

Blanks: n= 6

Table 1: PCDD/F blank

	[pg/column]
2,3,7,8-TCDF	<dl
1,2,3,7,8-PeCDF	<dl
2,3,4,7,8-PeCDF	<dl
1,2,3,4,7,8-HxCDF	<0,027
1,2,3,6,7,8-HxCDF	0,054
2,3,4,6,7,8-HxCDF	<0,045
1,2,3,7,8,9-HxCDF	<0,045
1,2,3,4,6,7,8-HpCDF	<dl
1,2,3,4,7,8,9-HpCDF	<0,018
1,2,3,4,6,7,8,9-OCDF	0,07
2,3,7,8-TCDD	<0,036
1,2,3,7,8-PeCDD	<dl
1,2,3,4,7,8-HxCDD	0,045
1,2,3,6,7,8-HxCDD	<0,108
1,2,3,7,8,9-HxCDD	0,045
1,2,3,4,6,7,8-HpCDD	<0,09
1,2,3,4,6,7,8,9-OCDD	1,01

Table 2: PCB blank

	[pg/column]
PCB-#28	1,08
PCB-#52	0,98
PCB-#101	0,75
PCB-#153	0,6
PCB-#138	0,3
PCB-#180	<0,162
PCB-#81	0,18
PCB-#77	0,1167
PCB-#126	<dl
PCB-#169	0,307
PCB-#123	0,19
PCB-#118	0,45
PCB-#114	0,145
PCB-#105	0,12
PCB-#167	0,289
PCB-#156	0,487
PCB-#157	0,38
PCB-#189	0,527

PCDD/F TEQ (2005)	[pg/column]
lower bound	0,05
upper bound	0,08

PCB-TEQ	[pg/column]
lower bound	0,0093
upper bound	0,0094
Sum DIN	3,7

Table 3: PCDD/F recoveries

	[%]	RSD [%]	
PCDD/F 13C Recoveries [%]	2,3,7,8-TCDF	94	14
	1,2,3,7,8-PeCDF	95	17
	2,3,4,7,8-PeCDF	91	16
	1,2,3,4,7,8-HxCDF	97	9
	1,2,3,6,7,8-HxCDF	116	10
	2,3,4,6,7,8-HxCDF	112	12
	1,2,3,7,8,9-HxCDF	111	11
	1,2,3,4,6,7,8-HpCDF	94	11
	1,2,3,4,7,8,9-HpCDF	93	11
	1,2,3,4,6,7,8,9-OCDF	84	7
	2,3,7,8-TCDD	92	10
	1,2,3,7,8-PeCDD	99	11
	1,2,3,4,7,8-HxCDD	117	14
	1,2,3,6,7,8-HxCDD	100	14
	1,2,3,7,8,9-HxCDD	114	11
	1,2,3,4,6,7,8-HpCDD	95	15
	1,2,3,4,6,7,8,9-OCDD	71	6

Table 4: PCB recoveries

	[%]	RSD [%]	
PCB 13C Recoveries [%]	PCB-#28	95	3
	PCB-#52	98	4
	PCB-#101	98	2
	PCB-#153	99	1
	PCB-#138	94	1
	PCB-#180	96	2
	PCB-#81	111	0
	PCB-#77	114	0
	PCB-#126	115	0
	PCB-#169	103	0
	PCB-#123	93	4
	PCB-#118	91	4
	PCB-#114	91	3
	PCB-#105	92	4
	PCB-#167	98	2
	PCB-#156	97	3
	PCB-#157	98	4
	PCB-#189	100	2