

Quality Control Certificate

Product: **Florisil Column**
Product No.: 13807
Lot No.: **721859**

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:	0,06 pg/column (crit: < 0,70 pg/column)
	dl-PCB-TEQ:	0,0172 pg/column (crit: < 0,05 pg/column)
	Sum Total PCB:	1,9 pg/column (crit: < 300 pg/column)

Results Recoveries:	PCDD/F	71	to	111	%	(crit: 70	to	120	%)
	PCB	93	to	119	%	(crit: 70	to	120	%)

This is to certify that the Florisil Column, Lot 721859, passed the required test specifications and is released for sale.

date: 21.05.2025

sign.: 

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= 12

Table 1: PCDD/F blank

	[pg/column]
2,3,7,8-TCDF	<dl
1,2,3,7,8-PeCDF	<0,045
2,3,4,7,8-PeCDF	<0,081
1,2,3,4,7,8-HxCDF	<0,027
1,2,3,6,7,8-HxCDF	0,022
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	<0,063
1,2,3,4,7,8,9-HpCDF	0,037
1,2,3,4,6,7,8,9-OCDF	<0,054
2,3,7,8-TCDD	<dl
1,2,3,7,8-PeCDD	<0,054
1,2,3,4,7,8-HxCDD	<0,027
1,2,3,6,7,8-HxCDD	<0,108
1,2,3,7,8,9-HxCDD	0,044
1,2,3,4,6,7,8-HpCDD	<0,09
1,2,3,4,6,7,8,9-OCDD	0,38

PCDD/F TEQ (2005)	[pg/column]
lower bound	0,05
upper bound	0,06

Table 2: PCB blank

	[pg/column]
PCB-#28	0,73
PCB-#52	0,47
PCB-#101	<dl
PCB-#153	0,69
PCB-#138	<0,261
PCB-#180	<0,18
PCB-#81	0,1
PCB-#77	0,2067
PCB-#126	0,03
PCB-#169	0,47
PCB-#123	0,02
PCB-#118	<0,108
PCB-#114	0,091
PCB-#105	0,11
PCB-#167	0,328
PCB-#156	0,367
PCB-#157	0,45
PCB-#189	0,19

PCB-TEQ	[pg/column]
lower bound	0,0172
upper bound	0,0172
Sum DIN	1,9

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Table 3: PCDD/F recoveries

		[%]	RSD [%]
PCDD/F 13C Recoveries [%]	2,3,7,8-TCDF	86	6
	1,2,3,7,8-PeCDF	88	4
	2,3,4,7,8-PeCDF	83	9
	1,2,3,4,7,8-HxCDF	101	10
	1,2,3,6,7,8-HxCDF	111	7
	2,3,4,6,7,8-HxCDF	108	11
	1,2,3,7,8,9-HxCDF	101	6
	1,2,3,4,6,7,8-HpCDF	99	9
	1,2,3,4,7,8,9-HpCDF	81	7
	1,2,3,4,6,7,8,9-OCDF	71	7
	2,3,7,8-TCDD	80	6
	1,2,3,7,8-PeCDD	88	9
	1,2,3,4,7,8-HxCDD	108	4
	1,2,3,6,7,8-HxCDD	92	8
	1,2,3,7,8,9-HxCDD	108	8
	1,2,3,4,6,7,8-HpCDD	93	7
	1,2,3,4,6,7,8,9-OCDD	73	11

Table 4: PCB recoveries

		[%]	RSD [%]
PCB 13C Recoveries [%]	PCB-#28	94	2
	PCB-#52	95	2
	PCB-#101	93	2
	PCB-#153	101	2
	PCB-#138	100	0
	PCB-#180	98	2
	PCB-#81	101	3
	PCB-#77	107	3
	PCB-#126	119	3
	PCB-#169	101	4
	PCB-#123	108	1
	PCB-#118	103	2
	PCB-#114	109	3
	PCB-#105	104	3
	PCB-#167	102	3
	PCB-#156	101	2
	PCB-#157	102	4
	PCB-#189	99	2