

Quality Control Certificate

Product: **Florisil Column**
 Product No.: 13807
 Lot No.: **718986**

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:	0,14	pg/column
		(crit: <	0,7 pg/column)
	dl-PCB-TEQ:	0,0183	pg/column
		(crit: <	0,05 pg/column)
	Sum Total PCB:	5	pg/column
		(crit: <	300 pg/column)

Results Recoveries:	PCDD/F	79	to	118	%	(crit: 70	to	120	%)
	PCB	93	to	120	%	(crit: 70	to	120	%)

This is to certify that the Florisil Column, Lot 718986, passed the required test specifications and is released for sale.

date: 08.09.2023 sign.: *M. Brack*

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	0,04
1,2,3,7,8-PeCDF	0,06
2,3,4,7,8-PeCDF	<0,081
1,2,3,4,7,8-HxCDF	0,038
1,2,3,6,7,8-HxCDF	0,038
2,3,4,6,7,8-HxCDF	0,06
1,2,3,7,8,9-HxCDF	0,08
1,2,3,4,6,7,8-HpCDF	0,07
1,2,3,4,7,8,9-HpCDF	0,082
1,2,3,4,6,7,8,9-OCDF	0,19
2,3,7,8-TCDD	<dl
1,2,3,7,8-PeCDD	<0,054
1,2,3,4,7,8-HxCDD	0,095
1,2,3,6,7,8-HxCDD	0,19
1,2,3,7,8,9-HxCDD	0,136
1,2,3,4,6,7,8-HpCDD	0,15
1,2,3,4,6,7,8,9-OCDD	0,3

Table 2: PCB blank

	[pg/column]
PCB-#28	1,37
PCB-#52	1,37
PCB-#101	0,72
PCB-#153	0,27
PCB-#138	0,3
PCB-#180	0,943
PCB-#81	0,17
PCB-#77	0,1367
PCB-#126	0,14
PCB-#169	0,138
PCB-#123	0,51
PCB-#118	0,62
PCB-#114	0,491
PCB-#105	0,54
PCB-#167	0,215
PCB-#156	0,76
PCB-#157	0,59
PCB-#189	0,977

PCDD/F TEQ (2005)	[pg/column]
lower bound	0,13
upper bound	0,14

PCB-TEQ	[pg/column]
lower bound	0,0183
upper bound	0,0183
Sum DIN	5

Table 3: PCDD/F recoveries

	[%]	RSD [%]	
PCDD/F 13C Recoveries [%]	2,3,7,8-TCDF	97	4
	1,2,3,7,8-PeCDF	95	5
	2,3,4,7,8-PeCDF	98	4
	1,2,3,4,7,8-HxCDF	109	2
	1,2,3,6,7,8-HxCDF	118	2
	2,3,4,6,7,8-HxCDF	113	2
	1,2,3,7,8,9-HxCDF	110	3
	1,2,3,4,6,7,8-HpCDF	103	2
	1,2,3,4,7,8,9-HpCDF	107	4
	1,2,3,4,6,7,8,9-OCDF	92	4
	2,3,7,8-TCDD	91	7
	1,2,3,7,8-PeCDD	96	7
	1,2,3,4,7,8-HxCDD	110	5
	1,2,3,6,7,8-HxCDD	98	4
	1,2,3,7,8,9-HxCDD	110	3
	1,2,3,4,6,7,8-HpCDD	102	4
	1,2,3,4,6,7,8,9-OCDD	79	5

Table 4: PCB recoveries

	[%]	RSD [%]	
PCB 13C Recoveries [%]	PCB-#28	100	2
	PCB-#52	97	5
	PCB-#101	108	1
	PCB-#153	95	1
	PCB-#138	99	2
	PCB-#180	97	2
	PCB-#81	117	0
	PCB-#77	119	0
	PCB-#126	120	0
	PCB-#169	116	0
	PCB-#123	110	3
	PCB-#118	103	4
	PCB-#114	106	4
	PCB-#105	102	4
	PCB-#167	99	2
	PCB-#156	120	1
	PCB-#157	93	11
	PCB-#189	102	2