

Quality Control Certificate

Product: **Florisil Column**
 Product No.: 13807
 Lot No.: **719781**

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:	0,22	pg/column
		(crit: <	0,7 pg/column)
	dl-PCB-TEQ:	0,0252	pg/column
		(crit: <	0,05 pg/column)
	Sum Total PCB:	10,3	pg/column
		(crit: <	300 pg/column)

Results Recoveries:	PCDD/F	73	to	105	%	(crit: 70	to	120	%)
	PCB	83	to	101	%	(crit: 70	to	120	%)

This is to certify that the Florisil Column, Lot 719781, passed the required test specifications and is released for sale.

date: 26.02.2024 sign.: T. Keshmeir

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= 10

Table 1: PCDD/F blank

	[pg/column]
2,3,7,8-TCDF	0,05
1,2,3,7,8-PeCDF	0,08
2,3,4,7,8-PeCDF	0,19
1,2,3,4,7,8-HxCDF	0,143
1,2,3,6,7,8-HxCDF	0,09
2,3,4,6,7,8-HxCDF	0,08
1,2,3,7,8,9-HxCDF	0,11
1,2,3,4,6,7,8-HpCDF	0,35
1,2,3,4,7,8,9-HpCDF	0,274
1,2,3,4,6,7,8,9-OCDF	0,24
2,3,7,8-TCDD	0,05
1,2,3,7,8-PeCDD	<dl
1,2,3,4,7,8-HxCDD	0,097
1,2,3,6,7,8-HxCDD	0,11
1,2,3,7,8,9-HxCDD	0,167
1,2,3,4,6,7,8-HpCDD	0,24
1,2,3,4,6,7,8,9-OCDD	0,71

Table 2: PCB blank

	[pg/column]
PCB-#28	1,98
PCB-#52	1,39
PCB-#101	1,56
PCB-#153	2,86
PCB-#138	1,8
PCB-#180	0,715
PCB-#81	0,22
PCB-#77	0,395
PCB-#126	0,15
PCB-#169	0,334
PCB-#123	0,25
PCB-#118	0,89
PCB-#114	0,131
PCB-#105	0,64
PCB-#167	0,333
PCB-#156	0,22
PCB-#157	0,06
PCB-#189	0,746

PCDD/F TEQ (2005)	[pg/column]
lower bound	0,2
upper bound	0,22

PCB-TEQ	[pg/column]
lower bound	0,0252
upper bound	0,0252
Sum DIN	10,3

Table 3: PCDD/F recoveries

	[%]	RSD [%]	
PCDD/F 13C Recoveries [%]	2,3,7,8-TCDF	89	5
	1,2,3,7,8-PeCDF	83	8
	2,3,4,7,8-PeCDF	81	11
	1,2,3,4,7,8-HxCDF	97	7
	1,2,3,6,7,8-HxCDF	104	10
	2,3,4,6,7,8-HxCDF	102	8
	1,2,3,7,8,9-HxCDF	101	9
	1,2,3,4,6,7,8-HpCDF	82	7
	1,2,3,4,7,8,9-HpCDF	100	11
	1,2,3,4,6,7,8,9-OCDF	78	5
	2,3,7,8-TCDD	88	4
	1,2,3,7,8-PeCDD	85	10
	1,2,3,4,7,8-HxCDD	105	7
	1,2,3,6,7,8-HxCDD	91	5
	1,2,3,7,8,9-HxCDD	103	6
	1,2,3,4,6,7,8-HpCDD	87	4
	1,2,3,4,6,7,8,9-OCDD	73	5

Table 4: PCB recoveries

	[%]	RSD [%]	
PCB 13C Recoveries [%]	PCB-#28	95	5
	PCB-#52	101	11
	PCB-#101	91	7
	PCB-#153	93	4
	PCB-#138	92	4
	PCB-#180	89	4
	PCB-#81	93	0
	PCB-#77	94	0
	PCB-#126	95	0
	PCB-#169	92	0
	PCB-#123	84	5
	PCB-#118	84	5
	PCB-#114	84	5
	PCB-#105	83	6
	PCB-#167	96	4
	PCB-#156	87	3
	PCB-#157	89	3
	PCB-#189	97	8