

## Quality Control Certificate

Product: **Florisil Column**  
Product No.: 13807  
Lot No.: **719526**

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:	0,62	pg/column
	(crit: <	0,7 pg/column)
dl-PCB-TEQ:	0,041	pg/column
	(crit: <	0,05 pg/column)
Sum Total PCB:	5,2	pg/column
	(crit: <	300 pg/column)

Results Recoveries:

PCDD/F	83	to	118	%	(crit: 70	to	120	%)
PCB	80	to	115	%	(crit: 70	to	120	%)

This is to certify that the Florisil Column, Lot 719526, passed the required test specifications and is released for sale.

date: 30.01.2024 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 &amp; 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 &amp; 2: blankvalues of PCDD/F and PCB table 3 &amp; 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	0,09
1,2,3,7,8-PeCDF	0,36
2,3,4,7,8-PeCDF	0,3
1,2,3,4,7,8-HxCDF	0,411
1,2,3,6,7,8-HxCDF	0,273
2,3,4,6,7,8-HxCDF	0,38
1,2,3,7,8,9-HxCDF	0,38
1,2,3,4,6,7,8-HpCDF	0,34
1,2,3,4,7,8,9-HpCDF	0,232
1,2,3,4,6,7,8,9-OCDF	0,56
2,3,7,8-TCDD	<0,036
1,2,3,7,8-PeCDD	0,15
1,2,3,4,7,8-HxCDD	0,449
1,2,3,6,7,8-HxCDD	0,81
1,2,3,7,8,9-HxCDD	0,54
1,2,3,4,6,7,8-HpCDD	0,56
1,2,3,4,6,7,8,9-OCDD	1,52

Table 2: PCB blank

	[pg/column]
PCB-#28	1,24
PCB-#52	1,05
PCB-#101	0,62
PCB-#153	0,65
PCB-#138	0,73
PCB-#180	0,871
PCB-#81	0,41
PCB-#77	1,23
PCB-#126	0,29
PCB-#169	0,39
PCB-#123	0,3
PCB-#118	0,43
PCB-#114	0,238
PCB-#105	0,41
PCB-#167	0,145
PCB-#156	0,469
PCB-#157	0,35
PCB-#189	0,636

PCDD/F TEQ (2005)	[pg/column]
lower bound	0,62
upper bound	0,62

PCB-TEQ	[pg/column]
lower bound	0,041
upper bound	0,041
Sum DIN	5,2

Table 3: PCDD/F recoveries

	[%]	RSD [%]	
PCDD/F 13C Recoveries [%]	2,3,7,8-TCDF	90	40
	1,2,3,7,8-PeCDF	115	5
	2,3,4,7,8-PeCDF	115	2
	1,2,3,4,7,8-HxCDF	100	4
	1,2,3,6,7,8-HxCDF	97	4
	2,3,4,6,7,8-HxCDF	102	12
	1,2,3,7,8,9-HxCDF	96	13
	1,2,3,4,6,7,8-HpCDF	92	15
	1,2,3,4,7,8,9-HpCDF	94	17
	1,2,3,4,6,7,8,9-OCDF	101	20
	2,3,7,8-TCDD	100	7
	1,2,3,7,8-PeCDD	118	2
	1,2,3,4,7,8-HxCDD	105	8
	1,2,3,6,7,8-HxCDD	83	8
	1,2,3,7,8,9-HxCDD	93	12
	1,2,3,4,6,7,8-HpCDD	96	14
	1,2,3,4,6,7,8,9-OCDD	93	15

Table 4: PCB recoveries

	[%]	RSD [%]	
PCB 13C Recoveries [%]	PCB-#28	105	16
	PCB-#52	95	11
	PCB-#101	88	17
	PCB-#153	80	18
	PCB-#138	93	25
	PCB-#180	93	18
	PCB-#81	99	0
	PCB-#77	104	0
	PCB-#126	106	0
	PCB-#169	115	0
	PCB-#123	87	14
	PCB-#118	89	17
	PCB-#114	85	10
	PCB-#105	86	16
	PCB-#167	95	9
	PCB-#156	103	24
	PCB-#157	95	20
	PCB-#189	105	12