

Quality Control Certificate

Product: **Universal Column**
 Product No.: 19511
 Lot No.: **723615**

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

Description: The Universal 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:	0,05	pg/column
		(crit: <	0,70 pg/column)
	dl-PCB-TEQ:	0,0013	pg/column
		(crit: <	0,05 pg/column)
	Sum Total PCB:	22,1	pg/column
		(crit: <	300 pg/column)

Results Recoveries:	PCDD/F	93	to	120	%	(crit: 70	to	120	%)
	PCB	80	to	120	%	(crit: 70	to	120	%)

This is to certify that the Universal Column, Lot 723615, passed the required test specifications and is released for sale.

date: 26.05.2026 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 Universal Column is designed and prepared for usage with the Alumina/Florisil 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 Universal 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 silica 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	<dl
1,2,3,6,7,8-HxCDF	<0,018
2,3,4,6,7,8-HxCDF	<dl
1,2,3,7,8,9-HxCDF	<dl
1,2,3,4,6,7,8-HpCDF	<0,063
1,2,3,4,7,8,9-HpCDF	<dl
1,2,3,4,6,7,8,9-OCDF	<0,054
2,3,7,8-TCDD	<dl
1,2,3,7,8-PeCDD	<dl
1,2,3,4,7,8-HxCDD	<dl
1,2,3,6,7,8-HxCDD	<0,108
1,2,3,7,8,9-HxCDD	<0,027
1,2,3,4,6,7,8-HpCDD	0,14
1,2,3,4,6,7,8,9-OCDD	0,66

Table 2: PCB blank

	[pg/column]
PCB-#28	10,35
PCB-#52	8,53
PCB-#101	1,97
PCB-#153	0,58
PCB-#138	0,66
PCB-#180	<0,18
PCB-#81	0,04
PCB-#77	0,175
PCB-#126	0,0121
PCB-#169	<dl
PCB-#123	0,04
PCB-#118	0,76
PCB-#114	0,004
PCB-#105	0,25
PCB-#167	<0,027
PCB-#156	<0,126
PCB-#157	0,03
PCB-#189	0,018

PCDD/F TEQ (2005)	[pg/column]
lower bound	0,01
upper bound	0,05

PCB-TEQ	[pg/column]
lower bound	0,0013
upper bound	0,0016
Sum DIN	22,1

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Table 3: PCDD/F recoveries

	[%]	RSD [%]	
PCDD/F 13C Recoveries [%]	2,3,7,8-TCDF	93	3
	1,2,3,7,8-PeCDF	94	5
	2,3,4,7,8-PeCDF	94	4
	1,2,3,4,7,8-HxCDF	108	4
	1,2,3,6,7,8-HxCDF	118	4
	2,3,4,6,7,8-HxCDF	118	5
	1,2,3,7,8,9-HxCDF	113	5
	1,2,3,4,6,7,8-HpCDF	120	5
	1,2,3,4,7,8,9-HpCDF	106	5
	1,2,3,4,6,7,8,9-OCDF	109	6
	2,3,7,8-TCDD	93	4
	1,2,3,7,8-PeCDD	98	4
	1,2,3,4,7,8-HxCDD	118	5
	1,2,3,6,7,8-HxCDD	101	5
	1,2,3,7,8,9-HxCDD	118	5
	1,2,3,4,6,7,8-HpCDD	109	3
	1,2,3,4,6,7,8,9-OCDD	96	5

Table 4: PCB recoveries

	[%]	RSD [%]	
PCB 13C Recoveries [%]	PCB-#28	91	4
	PCB-#52	120	5
	PCB-#101	104	4
	PCB-#153	93	5
	PCB-#138	91	5
	PCB-#180	94	6
	PCB-#81	97	4
	PCB-#77	101	4
	PCB-#126	96	5
	PCB-#169	96	5
	PCB-#123	95	4
	PCB-#118	95	6
	PCB-#114	99	3
	PCB-#105	92	4
	PCB-#167	82	7
	PCB-#156	83	6
	PCB-#157	85	8
	PCB-#189	80	6