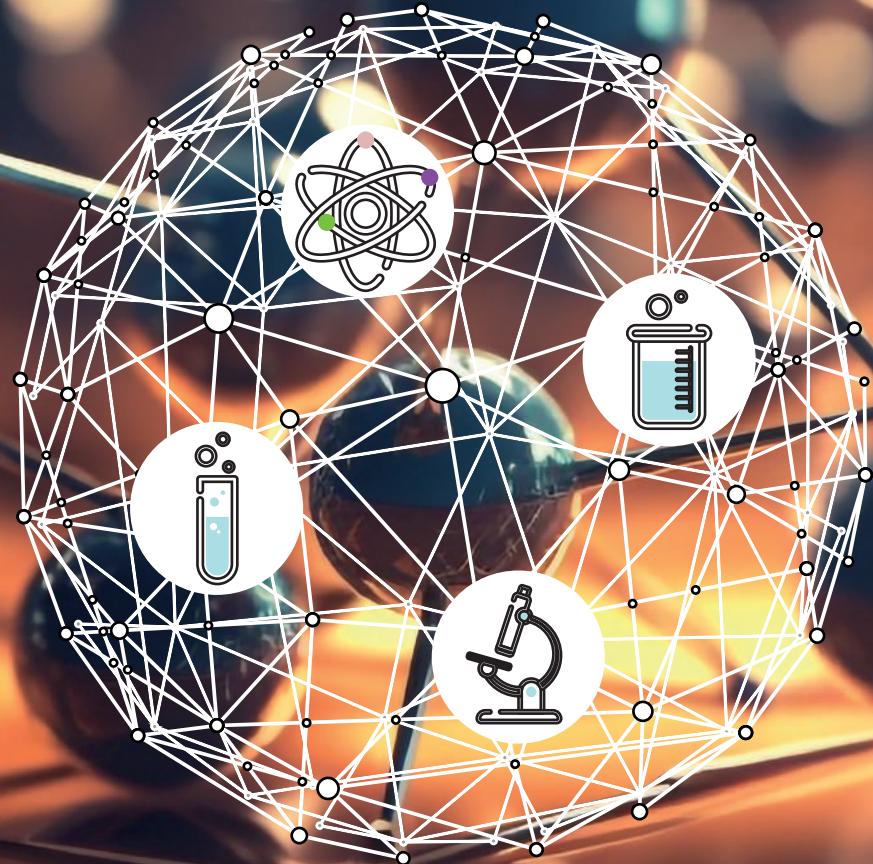


인증표준물질

Certified Reference Materials





중금속분석을 위한 시료전처리장비와 인증표준물질등 소모품 전문기업!



(주) 오디랩은 2008년 8월에 설립된 회사로 중금속분석에 사용되는 흑연블럭 산 분해장비인 에코프리 I, II, III 시리즈와 산 세척장치, 고순도 산 제조 장치, 유리분주기, ICP/ICP MS 소모품, 인증표준물질(CRM), 숙련도 평가물질(PT)등을 제조, 수입판매하고 있습니다.

(주) 오디랩에서 제조 판매하는 흑연블럭 산 분해장비는 열선 가열판이나 마이크로웨이브의 단점을 보완한 제품으로 국내를 비롯하여 세계 7개국에 특허를 획득하였고 현재 해외로도 수출 중에 있습니다.

또한 실험실에서 분석 데이터의 신뢰성 확보를 위한 인증표준물질(CRM)과 표준물질(RM), 국제숙련도 물질을 전세계에서 수입하여 판매하고 있습니다. 인증표준물질은 고객이 찾으시는 제품을 탐색하여 드리고 있으며, 가장 근접한 제품으로 추천드리고 있습니다.

특히 유럽환경규제인 RoHS에 대응한 IEC62321시험법에 나오는 인증표준물질을 국내 시험평가기관이나 국가기관에 공급하고 있으며, 환경부에서 실시하는 정도관리에 대응하여 LGC사에서 제공하는 환경관련 숙련도 물질을 공급하고 있습니다.

저희 (주) 오디랩은 화학실험실의 동반자로서
분석의 재현성과 정확성, 신뢰성 확보를 위해
언제나 고객의 노력과 함께 하겠습니다

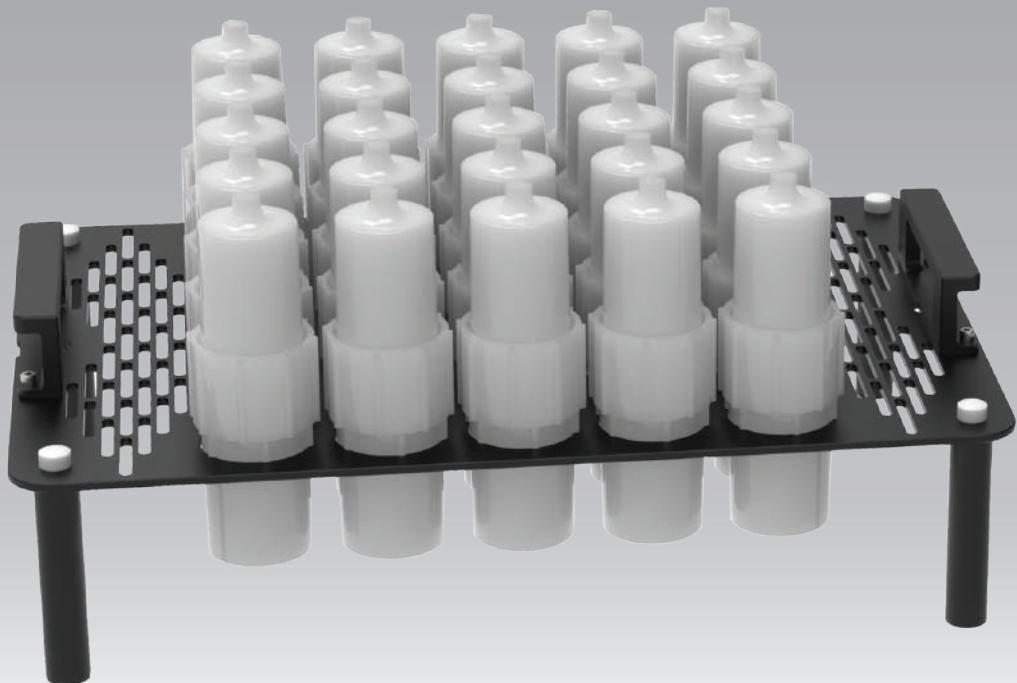


자동 산분해장비

ADS25



견적문의



경량화 & 벤탈레이션

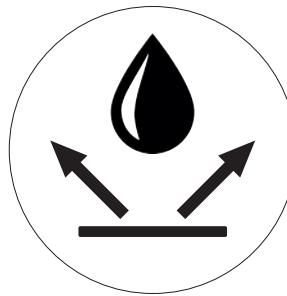
경량화 & 벤탈레이션 -



산순환 포집분해용기

산순환 포집분해용기 -

이동 및 보관을 위해 플레이트를 타공디자인으로 경량화를 하였습니다
또한 타공을 통하여 월활하게 열기의 순환이 이루어 집니다.



오염방지&내구성

오염방지&내구성 -

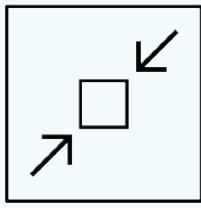
SUS 재질사용 및 테프론 특수코팅을 하여 표면이 쉽게 오염되지 않도록 제작하였습니다.
또한 상부 가열부와 하부 전자제어부는 서로 격리, 밀봉되어 열 또는 산 증기로 인하여
전자제어장치가 손상되지 않도록 되어있습니다.



앱 연동 조작

앱 연동 조작 -

20 Step 으로 가열 / 냉각 으로 분해조건을 프로그램화 할 수 있으며, 앱을 사용하여 조절 가능합니다.



컴팩트한 사이즈

컴팩트한 사이즈 -



오토메틱 리프팅

실험실 흡후드 내부에서 사용할 때 가장 적절한 사이즈로 설치 및 이동이 용이하고 전원스위치는 콘센트라인에 위치하고 있어서 산에대한 노출이 없고 내구성이 높습니다.

균일한 온도



오토메틱 리프팅 -

메뉴얼 및 프로그래밍 기능으로 반복적인 가열 / 냉각을 할 수 있도록 리프팅 기능이 있습니다.

균일한 온도 -

흑연 소재를 사용하여 균일한 온도를 제공하고 ($\pm 1^\circ\text{C}$ 온도편차를 갖는다) 제어는 0.2°C 로 제어된다.

수동 승강버튼 -

리프트 장치를 수동버튼을 사용하여 상부 랙(Rack)을 상하로 움직여 사용자가 원할 시 용기의 상태를 언제든지 확인 할 수 있습니다.



수동 승강버튼



GLASS EXPANSION
Quality By Design

ICP-OES / ICP-MS

모든 메이커 (애질런트, 써모, 퍼킨..etc) 전제품



견적문의

Toxin Dioxin Furan Pollutants

본 자료는 시기에 따라 제품 단종 및 수치의 변경이
있을 수 있으니 본사로 문의 부탁드립니다.

Toxin Code	Product	Unit
ERM-AC699	ZEARALENONE CALIBRANT	3 g
	The material is a solution of zearalenone in acetonitrile. It is supplied in amber glass ampoules filled and sealed under nitrogen in amounts of 4 mL.	
	Certified Value	
	Compound	Certified value [$\mu\text{g/mL}$]
	Zearalenone	9.95
ERM-AC057	AFLATOXIN B1 IN ACETONITRILE	3.1 g
	The material is provided in amber glass ampoules filled with 4 mL. The material was prepared from pure acetonitrile and crystalline aflatoxin B1.	
	Mass concentration at 20 °C	
	Compound	Indicative value [$\mu\text{g/mL}$]
	Aflatoxin B1	2.97
ERM-AC058	AFLATOXIN B2 IN ACETONITRILE	3.1 g
	The material is provided in amber glass ampoules filled with 4 mL. The material was prepared from pure acetonitrile and crystalline aflatoxin B2.	
	Mass concentration at 20 °C	
	Compound	Indicative value [$\mu\text{g/mL}$]
	Aflatoxin B2	2.98
ERM-AC059	AFLATOXIN G1 IN ACETONITRILE	3.1 g
	The material is provided in amber glass ampoules filled with 4 mL. The material was prepared from pure acetonitrile and crystalline aflatoxin B2.	
	Mass fraction	
	Compound	Certified value [$\mu\text{g/g}$]
	Aflatoxin G1	3.78
ERM-AC060	AFLATOXIN G2 IN ACETONITRILE	3.1 g
	The material is provided in amber glass ampoules filled with 4 mL. The material was prepared from pure acetonitrile and crystalline aflatoxin B2.	
	Mass concentration at 20 °C	
	Compound	Indicative value [$\mu\text{g/g}$]
	Aflatoxin G2	3.80
IRMM-315	4-DEOXYNIVALENOL in acetonitrile	3.1 g
	The material is provided in amber glass ampoules filled with 4 mL. The material was prepared from pure acetonitrile and crystalline 4-deoxynivalenol.	
	Mass concentration at 20 °C	
	Compound	Indicative value [$\mu\text{g/g}$]

Toxin

Code	Product	Unit
	4 - Deoxynivalenol content	25.1
IRMM - 316	NIVALENOL in acetonitrile	3.1 g
	The material is provided in amber glass ampoules filled with 4 mL. The material was prepared from pure acetonitrile and crystalline nivalenol monohydrate.	
	Mass concentration at 20 °C	
	Element	Indicative value [µg/mL]
	Nivalenol content	18.8
ERM-AE649	THALLIUM (NATURAL) SPIKE, NITRATE SOLUTION	5 g
	The spike isotopic reference material ERM-AE649 is supplied with a certified amount content of ^{205}Tl and certified isotopic composition of Tl.	
	Certified value	
	$\text{mol } ^{205}\text{Tl} \cdot \text{g}^{-1}$ (solution)	$8.3688 \cdot 10^{-7}$
	$n(^{203}\text{Tl})/n(^{205}\text{Tl})$	0.41891

Toxin

Dioxin / Furan / Pollutants std

Code	Product	Unit
BCR-047	BENZO (b) FLUORANTHENE (purity) The material is available in a brown glass bottle Certified Value Certified value [g/g] Benzo[b]fluoranthene 0.9974	0.1 g
BCR-048R	BENZO (k) FLUORANTHENE (purity) The material is available in a brown glass bottle Certified Value Certified value [g/g] Benzo[k]fluoranthene 0.997	0.1 g
BCR-049	BENZO (j) FLUORANTHENE (purity) The material is available in a brown glass bottle Certified Value Certified value [g/g] Benzo[j]fluoranthene 0.997	0.1 g
BCR-050	BENZO (e) PYRENE (purity) The material is available in a brown glass bottle Certified Value Certified value [g/g] Benzo[e]pyrene 0.991	0.1 g
BCR-052	BENZO (g h i) PERYLENE (purity) The material is available in a brown glass bottle Certified Value Certified value [g/g] Benzo[ghi]perylene 0.9923	0.1 g
BCR-077R	1-METHYLCHRYSENE (purity) The material is available in a brown glass bottle, containing 10 mg. The material corresponds to a 10 mg fraction of the original BCR-77 (100 mg units) repackaged under clean and inert gas conditions. Certified Value Certified value [g/g] 1-Methylchrysene 0.991	0.01 g

Dioxin / Furan / Pollutants std

Code	Product	Unit
BCR-078R	2-METHYLCHRYSENE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg. The material corresponds to a 10 mg fraction of the original BCR-78 (100 mg units) repackaged under clean and inert gas conditions.	
	Certified Value	Certified value [g/g]
	2-Methylchrysene	0.993
BCR-079R	3-METHYLCHRYSENE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg. The material corresponds to a 10 mg fraction of the original BCR-79 (100 mg units) repackaged under clean and inert gas conditions.	
	Certified Value	Certified value [g/g]
	3-Methylchrysene	0.993
BCR-080R	4-METHYLCHRYSENE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg. The material corresponds to a 10 mg fraction of the original BCR-80 (100 mg units) repackaged under clean and inert gas conditions.	
	Certified Value	Certified value [g/g]
	4-Methylchrysene	0.994
BCR-091	ANTHANTHRENE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg	
	Certified Value	Certified value [g/g]
	Anthanthrene	0.996
BCR-092	10-AZABENZO (a) PYRENE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	10-Azabenz[a]pyrene	0.996
BCR-093R	1-METHYLBENZ (a) ANTHRACENE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg. The material corresponds to a 10 mg fraction of the original BCR-93 (100 mg units) repackaged under clean and inert gas conditions.	
	Certified Value	Certified value [g/g]
	1-Methylbenz[a]anthracene	0.996

Dioxin / Furan / Pollutants std

Code	Product	Unit
BCR-094	DIBENZ (a.c) ANTHRACENE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Dibenz[a,c]anthracene	0.996
BCR-095	DIBENZ (a.j) ANTHRACENE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Dibenz[a,j]anthracene	0.9978
BCR-096	DIBENZO[a,l]PYRENE	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Benzo[j]fluoranthene	0.997
BCR-097	BENZO (a) FLUORANTHENE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Benzo[a]fluoranthene	0.996
BCR-133	DIBENZO (a,e) PYRENE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Dibenzo[a,e]pyrene	0.996
BCR-134	BENZO (c) PHENANTHRENE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Benzo[c]phenanthrene	0.9968
BCR-136R	BENZO (b) NAPHTHO (2,3-d) THIOPHENE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg.	
	Certified Value	Certified value [g/g]
	Benzo[b]naphtho[2,3-d]thiophene	0.994

Dioxin / Furan / Pollutants std

Code	Product	Unit
BCR-137R	BENZO (b) NAPHTHO (1,2-d) THIOPHENE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg.	
	Certified Value	Certified value [g/g]
	Benzo[b]naphtho[1,2-d]thiophene	0.9966
BCR-138	DIBENZO (a,h) ANTHRACENE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Dibenz[a,h]anthracene	0.990
BCR-139	BENZO (g h i) FLUORANTHENE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Benzo[ghi]fluoranthene	0.995
BCR-140	BENZO (c) CHRYSENE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Benzo[c]chrysene	0.996
BCR-153R	DIBENZ (a,h) ACRIDINE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg.	
	Certified Value	Certified value [g/g]
	Dibenz[a,h]acridine	0.9992
BCR-154	DIBENZ (a,j) ACRIDINE (purity)	0.02 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Dibenz[a,j]acridine	0.9990
BCR-155	DIBENZ (a,c) ACRIDINE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Dibenz[a,c]acridine	0.9991

Dioxin / Furan / Pollutants std

Dioxin / Furan
Pollutants std

Code	Product	Unit
BCR-156R	DIBENZ (c,h) ACRIDINE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg.	
	Certified Value	Certified value [g/g]
	Bibenz[c,h]acridine	0.9936
BCR-157	BENZ (a) ACRIDINE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Benz[a]acridine	0.9982
BCR-158	BENZ (c) ACRIDINE (purity)	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Benz[c]acridine	0.9987
BCR-159	DIBENZO[a,h]PYRENE	0.1 g
	The material is available in a brown glass bottle, containing 100 mg.	
	Certified Value	Certified value [g/g]
	Dibenzo[a,h]pyrene	0.993
BCR-160R	FLUORANTHENE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg.	
	Certified Value	Certified value [g/g]
	Fluoranthene	0.996
BCR-168	PICENE (purity)	0.01 g
	The material is available in a thick-walled amber glass vial containing 10 mg.	
	Certified Value	Certified value [g/g]
	Picene	0.998
BCR-177R	PYRENE (purity)	0.01 g
	The material is available in brown glass bottles containing 10 mg. The CRM corresponds to the original CRM BCR-177 (100 mg), which was re-packaged under clean and inert gas conditions.	
	Certified Value	Certified value [g/g]
	Pyrene	0.9980

Dioxin / Furan / Pollutants std

Code	Product	Unit
BCR-265	DIBENZO[a,e]FLUORANTHENE The material is available in an amber glass vial containing 20 mg.	0.02 g
	Certified Value Dibenzo[a,e]fluoranthene	Certified value [g/g] 0.9985
BCR-266	7H-DIBENZO (c,g) CARBAZOLE (purity) The material is available in an amber glass vial containing 20 mg.	0.02 g
	Certified Value 7H-Dibenzo[c,g]carbazole	Certified value [g/g] 0.9971
BCR-267	INDENO (1,2,3-cd) FLUORANTHENE (purity) The material is available in an amber glass vial containing 20 mg.	0.02 g
	Certified Value Indeno[1,2,3-cd]fluoranthene	Certified value [g/g] 0.9986
BCR-269	CHRYSENE (purity) The material is available in an amber glass vial containing 20 mg.	0.02 g
	Certified Value Chrysene	Certified value [g/g] 0.9928
BCR-270	TRIPHENYLENE (purity) The material is available in an amber glass vial containing 20 mg.	0.02 g
	Certified Value Triphenylene	Certified value [g/g] 0.9984
BCR-271	BENZ (a) ANTHRACENE (purity) The material is available in an amber glass vial containing 20 mg.	0.02 g
	Certified Value Benz[a]anthracene	Certified value [g/g] 0.9984
BCR-272	CORONENE (purity) The material is available in an amber glass vial containing 20 mg.	0.02 g
	Certified Value Coronene	Certified value [g/g] 0.9989

Dioxin / Furan / Pollutants std

Code	Product	Unit
ERM-AC051	BENZO[A]PYRENE	0.025 g
	The sample consists of 25 mg of benzo[a]pyrene in a brown glass sealed with a screw cap.	
	Certified Value	Certified value [g/g]
	Benzo[a]pyrene	0.979
ERM-AC053	INDENO[1,2,3-C,D]PYRENE	0.025 g
	The sample consists of 25 mg of indeno[1,2,3-cd]pyrene in a brown glass vial sealed with a screw cap.	
	Certified Value	Certified value [g/g]
	Indeno[1,2,3-cd]pyrene	0.996
ERM-AC082	6-METHYLCHRYSENE	0.025 g
	The sample consists of 25 mg of 6-methylchrysene in a brown glass vial sealed with a screw cap.	
	Certified Value	Certified value [g/g]
	6-Methylchrysene	0.983
BCR-305	1-NITROPYRENE (purity)	0.01 g
	The material is available in amber glass vials containing 10 mg.	
	Certified Value	Certified value [g/g]
	1-Nitropyrene	0.9976
BCR-306	1-NITRONAPHTHALENE	0.01 g
	The material is available in amber glass vials containing 10 mg.	
	Certified Value	Certified value [g/g]
	1-Nitronaphthalene	0.9969
BCR-307	2-NITRONAPHTHALENE	0.01 g
	The material is available in amber glass vials containing 10 mg.	
	Certified Value	Certified value [g/g]
	2-Nitronaphthalene	0.9977
BCR-308	9-NITROANTHRACENE (purity)	0.01 g
	The material is available in amber glass vials containing 10 mg.	
	Certified Value	Certified value [g/g]
	9-Nitroanthracene	0.9975

Dioxin / Furan / Pollutants std

Code	Product	Unit
BCR-309	6-NITROCHRYSENE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg.	
	Certified Value	Certified value [g/g]
	6- Nitrochrysene	0.989
BCR-310	3-NITROFLUORANTHENE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg.	
	Certified Value	Certified value [g/g]
	3-Nitrofluoranthene	0.9968
BCR-311	6-NITROBENZO (a) PYRENE (purity)	0.01 g
	The material is available in a brown glass bottle, containing 10 mg.	
	Certified Value	Certified value [g/g]
	6-Nitrobenzo[a]pyrene	0.9978
BCR-312	2-NITRO-7-METHOXYNAPHTHO (2,1-b) FURAN (purity)	0.01 g
	The material is available in amber glass vials containing 10 mg.	
	Certified Value	Certified value [g/g]
	2-Nitro-7-methoxynaphtho[2,1-b]furan	0.9984
BCR-337	DIBENZO (b,d) FURAN (purity)	0.01 g
	The material is available in amber glass vials containing 10 mg.	
	Certified Value	Certified value [g/g]
	Dibenzo[b,d]furan	0.987
BCR-339	BENZO (c,d) PYREN-6-ONE (purity)	0.01 g
	The material is available in amber glass vials containing 10 mg.	
	Certified Value	Certified value [g/g]
	6H-Benzo[c,d]pyren-6-one	0.988
BCR-340	BENZO (b) NAPHTHO (1,2-d) FURAN (purity)	0.01 g
	The material is available in amber glass vials containing 10 mg.	
	Certified Value	Certified value [g/g]
	Benzo[b]naphtho[1,2-d]furan	0.997

Dioxin / Furan / Pollutants std

Dioxin / Furan
Pollutants std

Code	Product	Unit
BCR-341	BENZO[b]NAPHTHO[2,1-d]FURAN	0.01 g
	The material is available in amber glass vials containing 10 mg.	
	Certified Value	Certified value [g/g]
	Benzo[b]naphtho[2,1-d]furan	0.996
BCR-342	BENZO[a]FLUORENONE	0.01 g
	The material is available in amber glass vials containing 10 mg.	
	Certified Value	Certified value [g/g]
	Benzo[a]fluorenone	0.9979
BCR-289	2,4'-DICHLOROBIPHENYL (IUPAC N.8) (purity)	0.025 g
	The material is available in an amber glass vial containing 25 mg.	
	Certified Value	Certified value [g/g]
	2,4'-Dichlorobiphenyl	0.9963
BCR-290	2,3,3'-TRICHLOROBIPHENYL (IUPAC N.20) (purity)	0.025 g
	The material is available in an amber glass vial containing 25 mg.	
	Certified Value	Certified value [g/g]
	2,3,3'-Trichlorobiphenyl	0.9985
BCR-291	2,4,4'-TRICHLOROBIPHENYL (IUPAC N. 28) (purity)	0.025 g
	The material is available in an amber glass vial containing 25 mg.	
	Certified Value	Certified value [g/g]
	2,4,4'-Trichlorobiphenyl	0.9979
BCR-293	2,2',5,5'-TETRACHLOROBIPHENYL (IUPAC N. 52) (purity)	0.025 g
	The material is available in an amber glass vial containing 25 mg.	
	Certified Value	Certified value [g/g]
	2,2',5,5'-Tetrachlorobiphenyl	0.9959
BCR-296	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (IUPAC N. 138) (purity)	0.025 g
	The material is available in an amber glass vial containing 25 mg.	
	Certified Value	Certified value [g/g]
	2,2',3,4,4',5'-Hexachlorobiphenyl	0.9992

Dioxin / Furan / Pollutants std

Code	Product	Unit
BCR-297	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (IUPAC N. 153) (purity) The material is available in an amber glass vial containing 25 mg.	0.025 g
	Certified Value 2,2',4,4',5,5'-Hexachlorobiphenyl 0.9994	Certified value [g/g]
BCR-298	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (IUPAC N. 180) (purity) The material is available in an amber glass vial containing 25 mg.	0.025 g
	Certified Value 2,2',3,4,4',5,5'-Heptachlorobiphenyl 0.9957	Certified value [g/g]
BCR-365	PCB STANDARD SOLUTION The reference material consists of 2 cm ³ of a solution of 10 PCBs in iso-octane sealed in a dark glass ampoule.	2.75 g
	Certified Value PCB congener number Indicative value [µg/cm ³] at 25 °C 8 7.8 20 10.5 28 17.1 35 9.8 52 10.2 101 9.9 118 10.3 138 5.9 153 9.8 180 10.4	
BCR-614 S0	SOLUTION OF PCDD/Fs IN N-NONANE The solution of natural and labelled PCDD and PCDF congeners in n-nonane is presented in brown glass ampoules sealed under helium gas. POLYCHLORODIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORODIBENZOFURANS (PCDFs) IN N-NONANE	0.8 g
	Certified Value Congener Certified value [µg/kg] Congener Certified value [µg/kg] 2,3,7,8-T ₄ CDD 0.137 1,2,3,4,7,8-HCDF 0.700 1,2,3,7,8-P ₅ CDD 0.698 1,2,3,6,7,8-HCDF 0.698 1,2,3,4,7,8-HCDD 0.688 1,2,3,7,8,9-HCDF 0.699 1,2,3,6,7,8-HCDD 0.696 2,3,4,6,7,8-HCDF 0.694 1,2,3,7,8,9-HCDD 0.705 1,2,3,4,6,7,8-HCDF 1.396 1,2,3,4,6,7,8-HCDD 1.400 1,2,3,4,7,8,9-HCDF 1.394 1,2,3,4,6,7,8,9-O ₈ CDD 1.396 1,2,3,4,6,7,8,9-O ₈ CDF 1.397 2,3,7,8-T ₄ CDF 0.1397 ¹³ C-2,3,7,8-T ₄ CDD 13.95 1,2,3,7,8-P ₅ CDF 0.707 ¹³ C-1,2,3,7,8-P ₅ CDD 13.9 2,3,4,7,8-P ₅ CDF 0.698 ¹³ C-1,2,3,4,7,8-HCDD 13.98	

Dioxin / Furan / Pollutants std

Code	Product	Unit
	$^{13}\text{C}-1,2,3,6,7,8\text{-HCDD}$ 13.94	$^{13}\text{C}-1,2,3,4,7,8\text{-HCDF}$ 13.90
	$^{13}\text{C}-1,2,3,7,8,9\text{-HCDD}$ 13.95	$^{13}\text{C}-1,2,3,6,7,8\text{-HCDF}$ 13.93
	$^{13}\text{C}-1,2,3,4,6,7,8\text{-HCDD}$ 27.9	$^{13}\text{C}-1,2,3,7,8,9\text{-HCDF}$ 13.93
	$^{13}\text{C}-1,2,3,4,6,7,8,9\text{-O}8\text{CDD}$ 27.87	$^{13}\text{C}-2,3,4,6,7,8\text{-HCDF}$ 13.931
	$^{13}\text{C}-2,3,7,8\text{-T}4\text{CDF}$ 13.96	$^{13}\text{C}-1,2,3,4,6,7,8\text{-HCDF}$ 27.92
	$^{13}\text{C}-1,2,3,7,8\text{-P}5\text{CDF}$ 13.94	$^{13}\text{C}-1,2,3,4,7,8,9\text{-HCDF}$ 27.87
	$^{13}\text{C}-2,3,4,7,8\text{-P}5\text{CDF}$ 13.95	$^{13}\text{C}-1,2,3,4,6,7,8,9\text{-O}8\text{CDF}$ 27.88
		$^{13}\text{C}-1,2,3,4\text{-T}4\text{CDD}$ 13.94

BCR-614 S1	SOLUTION OF PCDD/Fs IN N-NONANE	0.8 g
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The solution of natural and labelled PCDD and PCDF congeners in n-nonane is presented in brown glass ampoules sealed under helium gas.

POLYCHLORODIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORODIBENZOFURANS (PCDFs) IN N-NONANE

Certified Value

Congener	Certified value [[μg/kg]]	Congener	Certified value [[μg/kg]]
$2,3,7,8\text{-T}_4\text{CDD}$	0.273	$13\text{C}-2,3,7,8\text{-T}_4\text{CDD}$	13.95
$1,2,3,7,8\text{-P}_5\text{CDD}$	1.394	$13\text{C}-1,2,3,7,8\text{-P}_5\text{CDD}$	13.9
$1,2,3,4,7,8\text{-HCDD}$	1.37	$13\text{C}-1,2,3,4,7,8\text{-HCDD}$	13.98
$1,2,3,6,7,8\text{-HCDD}$	1.391	$13\text{C}-1,2,3,6,7,8\text{-HCDD}$	13.94
$1,2,3,7,8,9\text{-HCDD}$	1.408	$13\text{C}-1,2,3,7,8,9\text{-HCDD}$	13.95
$1,2,3,4,6,7,8\text{-HCDD}$	2.80	$13\text{C}-1,2,3,4,6,7,8\text{-HCDD}$	27.9
$1,2,3,4,6,7,8,9\text{-O}_8\text{CDD}$	2.787	$13\text{C}-1,2,3,4,6,7,8,9\text{-O}_8\text{CDD}$	27.87
$2,3,7,8\text{-T}_4\text{CDF}$	0.2790	$13\text{C}-2,3,7,8\text{-T}_4\text{CDF}$	13.96
$1,2,3,7,8\text{-P}_5\text{CDF}$	1.412	$13\text{C}-1,2,3,7,8\text{-P}_5\text{CDF}$	13.94
$2,3,4,7,8\text{-P}_5\text{CDF}$	1.395	$13\text{C}-2,3,4,7,8\text{-P}_5\text{CDF}$	13.95
$1,2,3,4,7,8\text{-HCDF}$	1.398	$13\text{C}-1,2,3,4,7,8\text{-HCDF}$	13.90
$1,2,3,6,7,8\text{-HCDF}$	1.393	$13\text{C}-1,2,3,6,7,8\text{-HCDF}$	13.93
$1,2,3,7,8,9\text{-HCDF}$	1.397	$13\text{C}-1,2,3,7,8,9\text{-HCDF}$	13.93
$2,3,4,6,7,8\text{-HCDF}$	1.387	$13\text{C}-2,3,4,6,7,8\text{-HCDF}$	13.93
$1,2,3,4,6,7,8\text{-HCDF}$	2.787	$13\text{C}-1,2,3,4,6,7,8\text{-HCDF}$	27.92
$1,2,3,4,7,8,9\text{-HCDF}$	2.78	$13\text{C}-1,2,3,4,7,8,9\text{-HCDF}$	27.87
$1,2,3,4,6,7,8,9\text{-O}_8\text{CDF}$	2.79	$13\text{C}-1,2,3,4,6,7,8,9\text{-O}_8\text{CDF}$	27.88
		$13\text{C}-1,2,3,4\text{-T}_4\text{CDD}$	13.94

BCR-614 S2	SOLUTION OF PCDD/Fs IN N-NONANE	0.8 g
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The solution of natural and labelled PCDD and PCDF congeners in n-nonane is presented in brown glass ampoules sealed under helium gas.

POLYCHLORODIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORODIBENZOFURANS (PCDFs) IN N-NONANE

Certified Value

Congener	Certified value [g/g]	Congener	Certified value [g/g]
$2,3,7,8\text{-T}_4\text{CDD}$	1.09	$13\text{C}-2,3,7,8\text{-T}_4\text{CDD}$	13.95
$1,2,3,7,8\text{-P}_5\text{CDD}$	5.57	$13\text{C}-1,2,3,7,8\text{-P}_5\text{CDD}$	13.9

Dioxin / Furan / Pollutants std

Code	Product	Unit
2,3,7,8-T ₄ CDD	1.09	¹³ C-2,3,7,8-T ₄ CDD 13.95
1,2,3,7,8-P ₅ CDD	5.57	¹³ C-1,2,3,7,8-P ₅ CDD 13.9
1,2,3,4,7,8-HCDD	5.49	¹³ C-1,2,3,4,7,8-HCDD 13.98
1,2,3,6,7,8-HCDD	5.56	¹³ C-1,2,3,6,7,8-HCDD 13.93
1,2,3,7,8,9-HCDD	5.63	¹³ C-1,2,3,7,8,9-HCDD 13.94
1,2,3,4,6,7,8-HCDD	11.18	¹³ C-1,2,3,4,6,7,8-HCDD 27.9
1,2,3,4,6,7,8,9-O ₈ CDD	11.15	¹³ C-1,2,3,4,6,7,8,9-O ₈ CDD 27.86
2,3,7,8-T ₄ CDF	1.116	¹³ C-2,3,7,8-T ₄ CDF 13.96
1,2,3,7,8-P ₅ CDF	5.65	¹³ C-1,2,3,7,8-P ₅ CDF 13.93
2,3,4,7,8-P ₅ CDF	5.58	¹³ C-2,3,4,7,8-P ₅ CDF 13.94
1,2,3,4,7,8-HCDF	5.59	¹³ C-1,2,3,4,7,8-HCDF 13.89
1,2,3,6,7,8-HCDF	5.57	¹³ C-1,2,3,6,7,8-HCDF 13.93
1,2,3,7,8,9-HCDF	5.59	¹³ C-1,2,3,7,8,9-HCDF 13.93
2,3,4,6,7,8-HCDF	5.55	¹³ C-2,3,4,6,7,8-HCDF 13.93
1,2,3,4,6,7,8-HCDF	11.15	¹³ C-1,2,3,4,6,7,8-HCDF 27.90
1,2,3,4,7,8,9-HCDF	11.14	¹³ C-1,2,3,4,7,8,9-HCDF 27.86
1,2,3,4,6,7,8,9-O ₈ CDF	11.16	¹³ C-1,2,3,4,6,7,8,9-O ₈ CDF 27.87
		¹³ C-1,2,3,4-T ₄ CDD 13.93

BCR-614 S2

SOLUTION OF PCDD/Fs IN N-NONANE

0.8 g

The solution of natural and labelled PCDD and PCDF congeners in n-nonane is presented in brown glass ampoules sealed under helium gas.

POLYCHLORODIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORODIBENZOFURANS (PCDFs) IN N-NONANE

Certified Value

Congener	Certified value [µg/kg]	Congener	Certified value [µg/kg]
2,3,7,8-T ₄ CDD	1.09	¹³ C-2,3,7,8-T ₄ CDD 13.95	
1,2,3,7,8-P ₅ CDD	5.57	¹³ C-1,2,3,7,8-P ₅ CDD 13.9	
1,2,3,4,7,8-HCDD	5.49	¹³ C-1,2,3,4,7,8-HCDD 13.98	
1,2,3,6,7,8-HCDD	5.56	¹³ C-1,2,3,6,7,8-HCDD 13.93	
1,2,3,7,8,9-HCDD	5.63	¹³ C-1,2,3,7,8,9-HCDD 13.94	
1,2,3,4,6,7,8-HCDD	11.18	¹³ C-1,2,3,4,6,7,8-HCDD 27.9	
1,2,3,4,6,7,8,9-O ₈ CDD	11.15	¹³ C-1,2,3,4,6,7,8,9-O ₈ CDD 27.86	
2,3,7,8-T ₄ CDF	1.116	¹³ C-2,3,7,8-T ₄ CDF 13.96	
1,2,3,7,8-P ₅ CDF	5.65	¹³ C-1,2,3,7,8-P ₅ CDF 13.93	
2,3,4,7,8-P ₅ CDF	5.58	¹³ C-2,3,4,7,8-P ₅ CDF 13.94	
1,2,3,4,7,8-HCDF	5.59	¹³ C-1,2,3,4,7,8-HCDF 13.89	
1,2,3,6,7,8-HCDF	5.57	¹³ C-1,2,3,6,7,8-HCDF 13.93	
1,2,3,7,8,9-HCDF	5.59	¹³ C-1,2,3,7,8,9-HCDF 13.93	
2,3,4,6,7,8-HCDF	5.55	¹³ C-2,3,4,6,7,8-HCDF 13.93	
1,2,3,4,6,7,8-HCDF	11.15	¹³ C-1,2,3,4,6,7,8-HCDF 27.90	
1,2,3,4,7,8,9-HCDF	11.14	¹³ C-1,2,3,4,7,8,9-HCDF 27.86	
1,2,3,4,6,7,8,9-O ₈ CDF	11.16	¹³ C-1,2,3,4,6,7,8,9-O ₈ CDF 27.87	
		¹³ C-1,2,3,4-T ₄ CDD 13.93	

Dioxin / Furan / Pollutants std

Code	Product	Unit																																																																												
BCR-614 S3	SOLUTION OF PCDD/Fs IN N-NONANE	0.8 g																																																																												
<p>The solution of natural and labelled PCDD and PCDF congeners in n-nonane is presented in brown glass ampoules sealed under helium gas.</p> <p>POLYCHLORODIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORODIBENZOFURANS (PCDFs) IN N-NONANE</p>																																																																														
<p>Certified Value</p> <table> <thead> <tr> <th>Congener</th> <th>Certified value [[µg/kg]]</th> <th>Congener</th> <th>Certified value [[µg/kg]]</th> </tr> </thead> <tbody> <tr><td>2,3,7,8-T₄CDD</td><td>5.47</td><td>¹³C-2,3,7,8-T₄CDD</td><td>13.95</td></tr> <tr><td>1,2,3,7,8-P₅CDD</td><td>27.9</td><td>¹³C-1,2,3,7,8-P₅CDD</td><td>13.9</td></tr> <tr><td>1,2,3,4,7,8-HCDD</td><td>27.5</td><td>¹³C-1,2,3,4,7,8-HCDD</td><td>13.98</td></tr> <tr><td>1,2,3,6,7,8-HCDD</td><td>27.81</td><td>¹³C-1,2,3,6,7,8-HCDD</td><td>13.93</td></tr> <tr><td>1,2,3,7,8,9-HCDD</td><td>28.17</td><td>¹³C-1,2,3,7,8,9-HCDD</td><td>13.95</td></tr> <tr><td>1,2,3,4,6,7,8-HCDD</td><td>55.9</td><td>¹³C-1,2,3,4,6,7,8-HCDD</td><td>27.9</td></tr> <tr><td>1,2,3,4,6,7,8,9-O₈CDD</td><td>55.74</td><td>¹³C-1,2,3,4,6,7,8,9-O₈CDD</td><td>27.87</td></tr> <tr><td>2,3,7,8-T₄CDF</td><td>5.58</td><td>¹³C-2,3,7,8-T₄CDF</td><td>13.96</td></tr> <tr><td>1,2,3,7,8-P₅CDF</td><td>28.2</td><td>¹³C-1,2,3,7,8-P5CDF</td><td>13.93</td></tr> <tr><td>2,3,4,7,8-P₅CDF</td><td>27.90</td><td>¹³C-2,3,4,7,8-P5CDF</td><td>13.94</td></tr> <tr><td>1,2,3,4,7,8-HCDF</td><td>27.96</td><td>¹³C-1,2,3,4,7,8-HCDF</td><td>13.90</td></tr> <tr><td>1,2,3,6,7,8-HCDF</td><td>27.87</td><td>¹³C-1,2,3,6,7,8-HCDF</td><td>13.93</td></tr> <tr><td>1,2,3,7,8,9-HCDF</td><td>27.9</td><td>¹³C-1,2,3,7,8,9-HCDF</td><td>13.93</td></tr> <tr><td>2,3,4,6,7,8-HCDF</td><td>27.73</td><td>¹³C-2,3,4,6,7,8-HCDF</td><td>13.93</td></tr> <tr><td>1,2,3,4,6,7,8-HCDF</td><td>55.74</td><td>¹³C-1,2,3,4,6,7,8-HCDF</td><td>27.91</td></tr> <tr><td>1,2,3,4,7,8,9-HCDF</td><td>55.7</td><td>¹³C-1,2,3,4,7,8,9-HCDF</td><td>27.87</td></tr> <tr><td>1,2,3,4,6,7,8,9-O₈CDF</td><td>55.8</td><td>¹³C-1,2,3,4,6,7,8,9-O₈CDF</td><td>27.88</td></tr> <tr><td></td><td></td><td>¹³C-1,2,3,4-T₄CDD</td><td>13.93</td></tr> </tbody> </table>			Congener	Certified value [[µg/kg]]	Congener	Certified value [[µg/kg]]	2,3,7,8-T ₄ CDD	5.47	¹³ C-2,3,7,8-T ₄ CDD	13.95	1,2,3,7,8-P ₅ CDD	27.9	¹³ C-1,2,3,7,8-P ₅ CDD	13.9	1,2,3,4,7,8-HCDD	27.5	¹³ C-1,2,3,4,7,8-HCDD	13.98	1,2,3,6,7,8-HCDD	27.81	¹³ C-1,2,3,6,7,8-HCDD	13.93	1,2,3,7,8,9-HCDD	28.17	¹³ C-1,2,3,7,8,9-HCDD	13.95	1,2,3,4,6,7,8-HCDD	55.9	¹³ C-1,2,3,4,6,7,8-HCDD	27.9	1,2,3,4,6,7,8,9-O ₈ CDD	55.74	¹³ C-1,2,3,4,6,7,8,9-O ₈ CDD	27.87	2,3,7,8-T ₄ CDF	5.58	¹³ C-2,3,7,8-T ₄ CDF	13.96	1,2,3,7,8-P ₅ CDF	28.2	¹³ C-1,2,3,7,8-P5CDF	13.93	2,3,4,7,8-P ₅ CDF	27.90	¹³ C-2,3,4,7,8-P5CDF	13.94	1,2,3,4,7,8-HCDF	27.96	¹³ C-1,2,3,4,7,8-HCDF	13.90	1,2,3,6,7,8-HCDF	27.87	¹³ C-1,2,3,6,7,8-HCDF	13.93	1,2,3,7,8,9-HCDF	27.9	¹³ C-1,2,3,7,8,9-HCDF	13.93	2,3,4,6,7,8-HCDF	27.73	¹³ C-2,3,4,6,7,8-HCDF	13.93	1,2,3,4,6,7,8-HCDF	55.74	¹³ C-1,2,3,4,6,7,8-HCDF	27.91	1,2,3,4,7,8,9-HCDF	55.7	¹³ C-1,2,3,4,7,8,9-HCDF	27.87	1,2,3,4,6,7,8,9-O ₈ CDF	55.8	¹³ C-1,2,3,4,6,7,8,9-O ₈ CDF	27.88			¹³ C-1,2,3,4-T ₄ CDD	13.93
Congener	Certified value [[µg/kg]]	Congener	Certified value [[µg/kg]]																																																																											
2,3,7,8-T ₄ CDD	5.47	¹³ C-2,3,7,8-T ₄ CDD	13.95																																																																											
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1,2,3,4,7,8-HCDD	27.5	¹³ C-1,2,3,4,7,8-HCDD	13.98																																																																											
1,2,3,6,7,8-HCDD	27.81	¹³ C-1,2,3,6,7,8-HCDD	13.93																																																																											
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1,2,3,4,6,7,8-HCDD	55.9	¹³ C-1,2,3,4,6,7,8-HCDD	27.9																																																																											
1,2,3,4,6,7,8,9-O ₈ CDD	55.74	¹³ C-1,2,3,4,6,7,8,9-O ₈ CDD	27.87																																																																											
2,3,7,8-T ₄ CDF	5.58	¹³ C-2,3,7,8-T ₄ CDF	13.96																																																																											
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1,2,3,6,7,8-HCDF	27.87	¹³ C-1,2,3,6,7,8-HCDF	13.93																																																																											
1,2,3,7,8,9-HCDF	27.9	¹³ C-1,2,3,7,8,9-HCDF	13.93																																																																											
2,3,4,6,7,8-HCDF	27.73	¹³ C-2,3,4,6,7,8-HCDF	13.93																																																																											
1,2,3,4,6,7,8-HCDF	55.74	¹³ C-1,2,3,4,6,7,8-HCDF	27.91																																																																											
1,2,3,4,7,8,9-HCDF	55.7	¹³ C-1,2,3,4,7,8,9-HCDF	27.87																																																																											
1,2,3,4,6,7,8,9-O ₈ CDF	55.8	¹³ C-1,2,3,4,6,7,8,9-O ₈ CDF	27.88																																																																											
		¹³ C-1,2,3,4-T ₄ CDD	13.93																																																																											
ERM-AC213	PAHs IN TOLUENE	2 g																																																																												
<p>The sample consists of 2 mL toluene containing 15 PAHs in an ampoule.</p>																																																																														
<p>Certified Value</p> <table> <thead> <tr> <th>Congener</th> <th>Certified value [µg/g]</th> <th>Congener</th> <th>Certified value [µg/g]</th> </tr> </thead> <tbody> <tr><td>Benz[a]anthracene</td><td>3.09</td><td>Benzo[a]pyrene</td><td>2.95</td></tr> <tr><td>Chrysene</td><td>3.06</td><td>Indeno[1,2,3-cd]pyrene</td><td>3.13</td></tr> <tr><td>5-methylchrysene</td><td>3.08</td><td>Dibenz[a,h]anthracene</td><td>2.76</td></tr> <tr><td>Benzo[b]fluoranthene</td><td>3.05</td><td>Benzo[ghi]perylene</td><td>3.07</td></tr> <tr><td>Benzo[k]fluoranthene</td><td>3.06</td><td>Dibenzo[a,l]pyrene</td><td>2.85</td></tr> <tr><td>Benzo[j]fluoranthene</td><td>3.05</td><td>Dibenzo[a,e]pyrene</td><td>2.97</td></tr> </tbody> </table>			Congener	Certified value [µg/g]	Congener	Certified value [µg/g]	Benz[a]anthracene	3.09	Benzo[a]pyrene	2.95	Chrysene	3.06	Indeno[1,2,3-cd]pyrene	3.13	5-methylchrysene	3.08	Dibenz[a,h]anthracene	2.76	Benzo[b]fluoranthene	3.05	Benzo[ghi]perylene	3.07	Benzo[k]fluoranthene	3.06	Dibenzo[a,l]pyrene	2.85	Benzo[j]fluoranthene	3.05	Dibenzo[a,e]pyrene	2.97																																																
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NIST-2621a	Carbon Dioxide in Nitrogen (Nominal Amount-of-Substance Fraction 1.5 % mol/mol)	6 L cylinder																																																																												
<p>This SRM mixture is supplied in a DOT 3AL-specification aluminum (6061 alloy) cylinder with a water volume of 6 L. Mixtures are shipped with a nominal pressure exceeding 12.4 MPa (1800 psig), which provides the user with 0.73 m³ (25.8 ft³) of useable mixture.</p>																																																																														
<p>Certified Value</p>																																																																														
<p>Carbon Dioxide Concentration 1.4594 % mol/mol ± 0.0016 % mol/mol</p>																																																																														

Dioxin / Furan / Pollutants std

Code	Product	Unit
NIST-2622a	Carbon Dioxide in Nitrogen (Nominal Amount-of-Substance Fraction 2 % mol/mol)	6 L cylinder

This SRM mixture is supplied in a DOT 3AL-specification aluminum (6061 alloy) cylinder with a water volume of 6 L. Mixtures are shipped with a nominal pressure exceeding 12.4 MPa (1800 psig), which provides the user with 0.73 m³ (25.8 ft³) of useable mixture.

Certified Value

Carbon Dioxide Concentration 1.9868 % mol/mol ± 0.0025 % mol/mol



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- Address : 401 BIENPALACE, 529, Geumha-ro, Gwangmyeong-si
, Gyeonggi-do, Republic of Korea
경기도 광명시 금하로 529 비엔팰리스 401호
 - Telephone : 02-809-7847~8 ● Fax : 02-6405-7848
 - E-mail : sales1@odlab.co.kr ● Home page : www.odlab.co.kr
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