

REFERENCE MATERIALS FOR FOOD, ENVIRONMENTAL AND CANNABIS ANALYSIS

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LGC Quality ISO 17034 | ISO/IEC 17025 | ISO 9001



Since 1975, Dr. Ehrenstorfer[™] has led the way in producing pesticide reference standards. Today, our portfolio has expanded to adapt to changing regulations and technology.

You'll find all our latest products within this catalogue, including:

- Our groundbreaking iMix range the largest range of analytes in one mix
- Our leading range of neat materials. Those that are manufactured under ISO 17034 are labelled in this catalogue with the symbol [‡]
- New pesticide and metabolite reference materials
- Stable isotope labelled reference materials for analysis using mass spectrometry
- A wide range of veterinary and pharmaceutical residue reference materials, including marker metabolites
- Popular mixtures for EPA and other regulatory methods
- Our significant update to cannabis related reference materials to support potency, quality and contamination testing
- A chapter dedicated to our wide range of mycotoxin reference materials for your analytical testing





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email dr.ehrenstorfer@lgcgroup.com Or contact your local office (inside back cover).



Nadine Müller, Chromatography Team Leader

EHRENSTORFER QUALITY

At Dr. Ehrenstorfer we place an emphasis on quality as part of our commitment to providing you with products you can trust. Here is what 'Ehrenstorfer Quality' means to us:



Producing to the highest standard

Dr. Ehrenstorfer reference materials are produced to the highest quality, with all analytical measurements performed under our ISO/IEC 17025 scope of accreditation and a leading portfolio of products produced according to our ISO 17034 accreditation. We use the most advanced analytical techniques to characterise our reference materials so that you can rely on the scientific integrity of the data contained in your Certificate of Analysis.



Ensuring confidence from characterisation to implementation

We use real-time stability testing and expiry date management to give you confidence in your Dr. Ehrenstorfer reference materials and ensure you receive your products as certified, ready for your analysis. Our careful packaging choices protect your product during delivery and storage, and are made with your convenience and safety in mind.



Offering a unique and extensive portfolio

We produce an unrivalled portfolio of reference materials for food and environmental analysis, including unique substances, stable isotope labelled compounds and metabolites. Dr. Ehrenstorfer continues to be a global leader in pesticides and our range also features pharmaceutical and veterinary compounds, food related compounds, dyes, food packaging contaminants and more. We offer multiple formats including neats, single and multicomponent solutions.



Through direct interactions with our customers and our expertise in the latest scientific and regulatory developments, we are able to quickly adapt our portfolio of reference materials to address your needs. We are committed to providing you with trusted solutions, today and tomorrow.



At Dr. Ehrenstorfer we combine experience with continuous training to ensure that the latest knowledge and skills are being applied to producing your reference materials. As part of the LGC family, we are proud to connect with our customers across a global network, with dedicated local teams able to support your reference materials decisions and the implementation of our products in your analytical testing.



Our heritage, our vision, your guarantee

Dr. Ehrenstorfer is built upon more than 40 years of history in planning, developing, producing, analysing, packaging and delivering high quality reference materials to our customers around the world with speed and reliability. We are passionate about our work which supports you in your **science for a safer world**.



To learn more, visit lgcstandards.com/drehrenstorfer

YOUR INDUSTRY INSIGHTS

Combating the threat of Antibiotic Residues in food



Antimicrobial resistance caused by veterinary medicines poses risks to human health, but a new, breakthrough testing kit from Dr Ehrenstorfer can help laboratories detect antibiotic residues more quickly and efficiently.

Veterinary medicines are used as both a preventive and a cure for a variety of diseases in production animals. Food products sourced from treated animals, may contain residues of these medicines for example, in eggs, meat or milk A 2019 study by Sachi et al highlighted the use of antimicrobials in animals suggesting that levels of antibiotic use in animals is more than double that of humans. The Food Standards Agency (FSA) has developed guidance for milk producers to ensure acceptable standards of hygiene are maintained and that the legal requirements for antibiotic residues are clear. This guidance does not consider instances of contamination through fraud or error therefore testing of food products before they enter the food chain is essential. Build-up of these substances in the food chain can enable the development of antimicrobial resistance in bacteria which perpetuates the need for stronger and more potent antimicrobial drugs.

A 2018 report by European Food Safety Authority (EFSA) summarised veterinary residue monitoring data in live animals and animal products collected over a 10-year period. Many samples were collected but the majority originated from inside the EU where there are strict controls on the use of veterinary drugs in animals.

- The percentage of samples that exceeded the maximum levels was 0.3%
- Comparable to the previous 10 years (0.25%-0.37%)
- A total of 657,818 samples were checked by 28 EU member states.



The report highlighted the need for closer monitoring of products imported into the EU with 0.4% of samples (3,022 sample size) identified as non-compliant and, of the total samples, 0.13% were found to contain unauthorised substances. Outside the EU however, drug products are not always used for therapeutic reasons – with their potential for use as growth promoters (hormones, beta-agonists, etc) particularly in countries where regulations or monitoring are not as strict as the EU. It has also been observed that some countries manage two food control systems, for products intended for domestic and international markets. This enables them to use veterinary medicines more freely in the domestic market. Therefore, screening of animal products entering the food chain can help to control the number of potentially harmful food products.

Veterinary drugs are one of the most chemically diverse group of compounds and metabolites, so it is technically challenging to develop a single multi-residue detection method to cover them. The number of sample preparation approaches is also diverse, with different sample extraction and purification procedures needed for each matrix of interest.

Most modern test methods are based upon LC-MS/MS, sometimes in conjunction with GC-MS/MS, to provide a high sensitivity and selectivity for a wide scope of chemical classes within a single multi-residue test method. The time and level of expertise needed to prepare a stable multiresidue reference material is the biggest challenge that laboratories encounter.

To ease the burden for laboratories, LGC Dr. Ehrenstorfer has developed PharmaVetResiMix to enable rapid screening of 59 analytes for liquid chromatography (LC) in just four ampoules.

These solutions can be combined in just three minutes to create a single solution providing a working standard for the day. Calibration, takes just 30 minutes, optimising a laboratory's efficiency and analytical performance.

You can extend the scope of Dr Ehrenstorfer's PharmaVetResiMix with two additional analyte groups, 10 Tetracyclines and 23 Beta lactams.

Designed for optimal elution and maximum stability, this product is the first of its kind. A mass screening and spiking method-validation product that doesn't sacrifice quality or reliability in providing you with a solution to increase efficiency and accuracy in your analytical processes.

Turn to page 450 to discover our range.

You can also learn more about pharmaceutical and veterinary residues in the food chain in the Dr. Ehrenstorfer podcast. experts Dr. Scott Haskell, Professor and Lead Instructor at Michigan State University and John Points, a UK based consultant who advises food manufacturers and regulators, discuss the global challenges posed by the use of pharmaceutical and veterinary medicines in both developing and first world countries. To download the podcast, visit **lgcstandards.com**





To learn more, visit lgcstandards.com/drehrenstorfer

TECH TIPS FOR USING YOUR REFERENCE MATERIALS

With over 45 years of experience in reference materials, who better to support your testing? Here our experts answer your key questions, so you can get the most from the Dr Ehrenstrofer range.

1

What is the difference between ISO Guide 34 and ISO 17034 produced reference materials?

ISO 17034:2016 specifies general requirements for the competence and consistent operation of reference material producers. It also sets out the requirements in accordance with which reference materials are produced. It is intended to be used as part of the general quality assurance procedures of the reference material producer.

According to International Organization for Standardization, ISO 17034 replaces the ISO Guide 34 and in doing so, changes all recommendations of the Guide into requirements. Thus, there is no difference between how a product is indicated to be produced under ISO Guide 34 and ISO 17034. More relevant changes include inclusion of more detail on the required documentation in accordance with ISO Guides 31. All Dr. Ehrenstorfer products produced under ISO 17034 and their Certificates of Analysis comply completely to the requirements of the accreditation.

2

How do I tell which products were produced under ISO 17034?

As leaders in quality not only are our Dr. Ehrenstorfer production facilities accredited to ISO 17034, we actively produce the majority of our portfolio is under our ISO 17034 scope of accreditation. These materials are clearly identified in the certificate of analysis and in this catalogue by the symbol ‡. This range is constantly increasing, therefore if you are unable to find the product that you require, please contact your local sales office or email us at dr.ehrenstorfer@lgcgroup.com.



Can I still use products that are not produced under ISO 17034 for my analysis?

The appropriate reference materials for your analysis are determined by the specific method you are following. All Dr. Ehrenstorfer reference materials are designed, produced and verified in accordance with a registered quality management system ISO 9001 and all analytical measurements were performed under our ISO/IEC 17025 scope of accreditation - ensuring traceability. Our certificates of analyses are designed in accordance with ISO Guide 31, whether or not they were produced under our ISO 17034 scope of accreditation, providing the highest standard at all quality levels.

4

How much material is in the bottle/ampoule?

Dr. Ehrenstorfer reference materials are supplied with a nominal weight or volume and are typically overfilled with up to 10% more of the product than stated. In order to use the material for your analysis, it is usually practical to prepare a solution. The solution preparation procedure described below can be used to calculate the exact amount of material present.



The container looks empty – is there anything inside?

Don't worry - Yes, there is! Where small quantities of solid material are supplied, this can be dispersed over the inside surface of the container. Liquid may also coat the inner surface of the container which may not be visible. To best extract all material from container, it is best to transfer the contents with appropriate solvent and dry according to procedure below to calculate the exact amount of material present. How can I extract all material from the bottle/ampoule and prepare a solution from a neat Dr. Ehrenstorfer product?

In order to recover all the material from the container the following procedure can be used. We recommend storing the vial / bottle in an upright position for at least 24 hours prior to handling.

- 1 Ensure the container is clean and dry. Using an analytical balance, weigh the container (including the lid for bottles) and record the weight.
- 2 Using a suitable solvent, carefully transfer the contents to a volumetric flask. Rinse the container (including the lid) at least three times and combine all rinses to ensure a complete transfer of material.
- 3 Dry the empty container completely, then using an analytical balance, weigh the dry, empty container and lid and record the weight.
- **4** Calculate the difference in weight between the first and second weighing. The difference in weight is the amount of material that has been transferred.
- 5 Make the solution up to volume in the volumetric flask. The concentration of the solution can then be determined. Where larger quantities of material are supplied, you may wish to only transfer an aliquot of the material. In these cases, you may need to use a weighing boat and a spatula to weigh the material before transferring it into the volumetric flask.

My Dr. Ehrenstorfer reference material was not shipped under the storage conditions found on the certificate of analysis. Is the product still ok to use?

The storage conditions on the certificate are for the long-term storage of the material. Normally products are not shipped under controlled conditions as shipping times are generally <72 hours and therefore short-term. One sample of each lot is kept aside to enable checks on the specific lot to be undertaken if required.



WHAT OUR CERTIFICATE OF ANALYSIS TELLS YOU

Every product you receive comes with a Dr. Ehrenstorfer Certificate of Analysis, which provides a full description of the material to which it relates, as well as a summary of the analyses undertaken during the characterisation process.

The following examples show Dr. Ehrenstorfer Reference Material Certificates of Analysis for neat products.

Certifi	icate of Analysis			
ISO Guide Product Ider Article Code Article Nam Formula: Mol. Weight CAS No.:	34 Reference Material httlication c DRE_C15080000 e: Phorate-culfoxide C7H1703/F3 t 276.36 2588-03-6		4 Lot Number: Expiry Date: Storage Temperature:	6142157 06.06.2020 4*C ± 4*C
Storage and ha	nding: The RM should be stored in the original sealed bottle add for original angled bottles under recommended storage of	at the temperatur given above. After use the bottl	e should be tightly closed and protected f	rom moisture and light. The
	Purity: 99.02% (g/g)			
	Expanded Uncertainty U= 0.88% (g/g)			
Traceability of intrument: Detection: Column: Inj-Vol: Ret.Time: Comment Traceability: Tr Calibrated clas Certificate Revi Water Content	Introducing which is the international System of Units (2), UNIC-SDA-SS UNIC-SDA-SS September 20 COLUMN 10 Jul 10	Method Datalh Acetaratrike Waler 40.15% Formic acid 2:1 national Islandards (DKD).		
identity: EA, Ni Certified on: Certified by:	MR, RT, IR, UV, MS 06.06.2017 M. Beck			

1 Product Name/Code Unique identifiers for the prod

2 Mol. Weight/Formula Molecular weight and formula stated directly on certificate for ease of reference.

3 CAS No. Unique identifier for the analyte assigned by the Chemical Abstracts Service.

4 Lot Number Identification number for a specific lot of the product.

5 Expiry Date Determined by real time and accelerated stability testing (dependent on format).

6 Storage Temperature Describes optimal long-term storage conditions based on stability studies.

7 Storage and Handling

These are the minimum storage requirements based on stability studies.

8 Certified Values

Purity and associated uncertainty determined for this particular lot of this product.

9 Uncertainty

The expanded uncertainty contribution is calculated according to ISO Guide 34 / ISO 17034.

10 Analytical Data

Details of the methodology used to determine the purity of this particular lot. Analytical chromatograms are also supplied where appropriate on supplementary pages.

11 Traceability

Traceability back to SI unit is demonstrated for all products.

ISO Guide 34 Reference Material Certificate, 2014 - 2018

For certificates of solutions, the following information is included:

Gravimetric data

Concentration of the product, purity and the weight of product.

Solvent information

Identity, lot number and exact quantity of solvent used.

Traceability data Identification of materials used including lot numbers for any neat and solution products used.



To learn more, visit lgcstandards.com/drehrenstorfer

CONTINUED

WHAT OUR CERTIFICATE OF ANALYSIS TELLS YOU





ISO 17034 Reference Material Certificate, 2019 - present

1 Accreditation/Quality Level Accreditation and Quality level of the product clearly defined.

2 Product Name/Code Unique identifiers for the product.

3 CAS No. Unique identifier for the analyte assigned by the Chemical Abstracts Service

4 Mol. Weight/Formula Molecular weight and formula stated directly on certificate for ease of reference.

5 Lot Number Identification number for a specific lot of the product.

6 Format

dentifies the product as a neat, a solution or a multicomponent solution

7 Expiry Date

Determined by real time and accelerated stability testing (dependent on format).

8 Storage Temperature

Describes optimal long-term storage conditions based on stability studies.

9 Chemical Structure

Provided for neats and single solutions to clearly define analyte.

10 Certified Values

Purity and associated uncertainty determined for this particular lot of this product. These are clearly displayed for you to easily identify

11 Uncertainty The expanded uncertainty contribution is calculated according to ISO 17034.

12 Certification Statement

Officially guarantees our confidence in the product.

13 Chromatogram

Including analytical conditions are provided with nearly all products.

14 Batch Information

Describes production methods and further relevant information such as water content and isomeric ratios where applicable.

15 Traceability

Traceability back to SI unit is demonstrated for all products.

16 Homogeneity

An assessment of homogeneity for ISO 17034 products is provided 17 Instructions for Use

Further tech tips to assist you in your analysis and handling of the product.

18 Stamp of Accreditation

Displayed on certificate for SO 17034 products to confirm approval by our accreditation bodies (not included on ISO 17025 Reference Material certificates).

If you need additional copies of the current Certificates of Analysis for individual lots of products in the range, simply visit **lgcstandards.com** or contact your local office, where our technical staff are always happy to advise on the suitability of a specific product, and how to use it. You can find a full list of all our local offices within the inside back cover of this catalogue.



To learn more, visit lgcstandards.com/drehrenstorfer

UNDERSTANDING OUR PRODUCT CATALOGUE

Dr. Ehrenstorfer is a leading manufacturer of pesticide standards and other organic reference materials. We typically have over 7,000 different products available, in a variety of formats, from neat materials to solutions of individual compounds and multicomponent solutions.



Neats & Single Solutions:

Multicomponent Solutions:



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Product code	Description			
N,N-Dimethyl-p-phei	nylendiamine			
CAS 99-98-9	MW 136.1943	CeH12N2		1
DRE-C12736000	N,N-Dimethyl-p-phenylendiar	mine	100mg	H ₂ N
2,4-Dimethyl-3,5,6-tr	ideuteriophenol			
CAS 93951-75-8	MW 125.1829	C₅²H₃H⁊O		² H
DRE-C12731100	2,4-Dimethylphenol D3 (3,5,6	5 D3)	100mg	² H OH
DRE-XA12731100AC	2,4-Dimethylphenol D3 (3,5,6	5 D3) 100 μg/mL in Acetone(‡)	1ml	
2,4-Dinitroaniline				
CAS 97-02-9	MW 183.1216	C ₆ H ₅ N ₃ O ₄		0 0
DRE-C12782000	2,4-Dinitroaniline(‡)		100mg	^N + ^N +_o-
DRE-A12782000ME- 1000	2,4-Dinitroaniline 1000 µg/ml	_ in Methanol(‡)	1ml	H ₂ N
2,6-Dinitroaniline				
CAS 606-22-4	MW 183.1216	C6H5N3O4		\wedge
DRE-C12782100	2,6-Dinitroaniline		100mg	
				0 NH2 0
3,5-Dinitroaniline				
CAS 618-87-1	MW 183.1216	CeH5N3O4		0 0 ''' '''
DRE-C12782200	3,5-Dinitroaniline		100mg	
				NH ₂
2,4-Dinitroanisole				
CAS 119-27-7	MW 198.1329	C7H6N2O5		0 0
DRE-C12782400	2,4-Dinitroanisole		100mg	-0 ^N + N ⁺ 0 ⁻
				0
1.2 Dipitrobonzono I	1			
	J4	C TUN C		- 2
CAS 54247-05-1	MW 172.1316	C ₆ ² H ₄ N ₂ O ₄	FOma	0 ² H 0 II ₊ II ₊ N N 0_
DRE-C12/03110			Joing	
				2 _H
1,2-Dinitrobenzene				
CAS 528-29-0	MW 168.107	C6H4N2O4		0
DRE-C12783000	1,2-Dinitrobenzene(‡)		250mg	Ñ [⁺] o⁻
				N +0 [−] 0
1,3-Dinitrobenzene				
CAS 99-65-0	MW 168.107	CeH4N2O4		0 0
DRE-C12783100	1,3-Dinitrobenzene(‡)		250mg	
DRE-L12783100ME	1,3-Dinitrobenzene 10 µg/mL	in Methanol	10ml	

Product code	Description			
1,4-Dinitrobenzene				
CAS 100-25-4	MW 168.107	C6H4N2O4		0
DRE-C12783200	1,4-Dinitrobenzene(‡)		250mg	0. N ⁺
2,4-Dinitrobenzoic	Acid			0
CAS 610-30-0	MW 212 1165	$C_7H_4N_2O_6$		0
DRE-C12783400	2,4-Dinitrobenzoic acid	0/1/4/12/00	250mg	ОН
			Ĵ	⁻ 0, N ⁺ U U O O ⁻
3,5-Dinitrobenzoic	Acid			
CAS 99-34-3	MW 212.1165	C7H4N2O6		0 0
DRE-C12783600	3,5-Dinitrobenzoic acid		250mg	-0 ^{, N+} -0 ^{, N} ⁺ 0 ^{, N} ⁺ 0 ⁺
2,4-Dinitrodiphenyla	amine			
CAS 961-68-2	MW 259.2176	C ₁₂ H ₉ N ₃ O ₄		0
DRE-C12783702	2,4-Dinitrodiphenylamine		100mg	
2,6-Dinitro-4-methy	lphenol			
CAS 609-93-8	MW 198.1329	C7H6N2O5		
DRE-C12784000	2,6-Dinitro-4-methylphenol		250mg	
2,6-Dinitrophenol				
CAS 573-56-8	MW 184.1064	C6H4N2O5		о он о
DRE-L12785400AL	2,6-Dinitrophenol 10 µg/mL	in Acetonitrile(‡)	10ml	
2,3-Dinitrotoluene				
CAS 602-01-7	MW 182.1335	C7H6N2O4		⁻ 0 ₂₁ , ⁰ 0
DRE-C12786100	2,3-Dinitrotoluene(‡)		250mg	
2,4-Dinitrotoluene				
CAS 121-14-2	MW 182.1335	C7H6N2O4		
DRE-C12786200	2,4-Dinitrotoluene(‡)		250mg	-0. 1 1 10
DRE-XA12786200AL	2,4-Dinitrotoluene 100 µg/m	L in Acetonitrile	1ml	
<u>DRE-A12786200ME-</u> <u>1000</u>	2,4-Dinitrotoluene 1000 µg/r	nL in Methanol(*)	1ml	0 0
2,6-Dinitrotoluene				
CAS 606-20-2	MW 182.1335	C7H6N2O4		0 _{°N+} 0
DRE-C12786400	2,6-Dinitrotoluene(‡)		250mg	
DRE-L12786400AL	2,6-Dinitrotoluene 10 µg/mL	in Acetonitrile	10ml	N ⁺ O ⁻

Product code	Description				
3,4-Dinitrotoluene					
CAS 610-39-9	MW 182.1335	C7H6N2O4		0 !!.+	
DRE-C12786500	3,4-Dinitrotoluene(‡)		100mg		
DRE-XA12786500AL	3,4-Dinitrotoluene 100 µg/mL	in Acetonitrile	1ml		
3.5-Dinitrotoluene				, i i i i i i i i i i i i i i i i i i i	
	M/M 102 1225	C-H-N-O.			
DRF-XA12786800AI	3 5-Dinitrotoluene 100 ug/ml	in Acetonitrile(†)	1ml		
				⁻ 0, N ⁺ N ⁺ 0	
				0 0 ⁻	
Diphenylmethane (1	,1-Diphenylmethane)				
CAS 101-81-5	MW 168.2344	C13H12			
DRE-C12904000	Diphenylmethane		500mg		
4 Dodooylahoad m	intura of loomoro		_		
4-Dodecyipnenoi, m	ixture of isomers				
CAS 2/193-86-8	MW n/a	icomore)	250mg		
DRE-C13066000	4-Dodecyiphenol (mixture or	isomers)	250Mg	No Structure	
4-n-Dodecylphenol					
CAS 104-43-8	MW 262.4302	C18H30O		он	
DRE-C13065100	4-n-Dodecylphenol		100mg	\square	
				Ĭ	
2-Ethylaniline					
CAS 578 54 1	MW 121 1706	Callan		NUL	
DRF-CA13319520	2-Ethylaniline		1ml	\downarrow^{NH_2}	
<u>DRE GARGET/020</u>					
4-Ethylcatechol (4-E	thylbenzene-1,2-diol)				
CAS 1124-39-6	MW 138.1638	C8H10O2		○ OH	
DRE-C13322250	4-Ethylcatechol		100mg		
				ОН	
4-(1-Ethyl-1.4-dimethylpentyl)phenol					
CAS 142731-63-3	MW 220.3505	C ₁₅ H ₂₄ O			
DRE-C13325500	4-(1-ethyl-1,4-dimethylpentyl)phenol	10mg	OH OH	
4-(1-Ethyl-1,4-dimet	hylpentyl)-phenol-mono-	ethoxylate			
CAS 1119449-37-4	MW 264.403	C ₁₇ H ₂₈ O ₂		A.O.	
DRE-C13325100	4-(1-Ethyl-1,4-dimethylpentyl)-phenol-mono-ethoxylate	10mg	С С С С С С С С С С С С С С С С С С С	

Product code	Description			
5-Ethyl-2-methylpyri	dine			
CAS 104-90-5	MW 121.1796	C8H11N		
DRE-C13349050	5-Ethyl-2-methylpyridine		1ml	N
2-Ethylphenol				
CAS 90-00-6	MW 122.1644	C8H10O		ŎН
DRE-C13350000	2-Ethylphenol(‡)		500mg	\sim
DRE-XA13350000ME	2-Ethylphenol 100 µg/mL in	Methanol	1ml	
DRE-A13350000ME- 1000	2-Ethylphenol 1000 µg/mL ir	n Methanol(‡)	1ml	Ť
3-Ethylphenol				
CAS 620-17-7	MW 122.1644	C8H10O		ОН
DRE-C13351000	3-Ethylphenol		500mg	
DRE-XA13351000ME	3-Ethylphenol 100 µg/mL in	Methanol	1ml	
4-Ethylphenol				
CAS 123-07-9	MW 122.1644	C8H10O		
DRE-C13352000 DRE-L13352000AL	4-Ethylphenol(‡) 4-Ethylphenol 10 μg/mL in A	cetonitrile	500mg 10ml	ОН
DRE-A13352000ME- 1000	4-Ethylphenol 1000 μg/mL ir	n Methanol(‡)	1ml	~ ~
3-Fluoroaniline				
CAS 372-19-0	MW 111.1169	C6H6FN		
DRE-C13779900	3-Fluoroaniline		250mg	F NH ₂
Fluorobenzene				
CAS 462-06-6	MW 96.1023	C ₆ H₅F		-
DRE-C13781000	Fluorobenzene(‡)		1ml	⊢ F
DRE-L13781000ME	Fluorobenzene 10 µg/mL in	Methanol(‡)	10ml	
DRE-A13781000ME-100	Fluorobenzene 1000 µg/mL	in Methanol	1ml	
<u>DRE-YA13781000ME</u>	Fluorobenzene 2000 µg/mL	in Methanol(‡)	1ml	
2-Fluorobiphenyl				
CAS 321-60-8	MW 172.1983	C12H9F		\wedge
DRE-C13785000	2-Fluorobiphenyl(‡)		100mg	
DRE-YA13785000CY	2-Fluorobiphenyl 2000 µg/m	L in Cyclohexane(‡)	1ml	F F
2-Fluorophenol				
CAS 367-12-4	MW 112.1017	C₀H₅FO		
DRE-CA13797000	2-Fluorophenol(‡)		100mg	ОН
DRE-A13797000ME- 1000	2-Fluorophenol 1000 µg/mL	in Methanol(‡)	1ml	F

Product code	Description			
Glyceryl Trinitrate ((Nitroglycerin)			
CAS 55-63-0	MW 227.0865	C₃H₅N₃O൭		0
DRE-XA15586000AL	Nitroglycerin 100 µg/mL in /	Acetonitrile	1ml	-0, N ⁺ 0, O, N ⁺ 0, O, N ⁺ 0, O,
4-Heptylphenol				
CAS 1987-50-4	MW 192.2973	C13H20O		
DRE-C14136500	4-Heptylphenol(‡)		100mg	Л ОН
Hexogen (RDX; He	xahydro-1,3,5-trinitro-1,3	3,5-triazine)		
CAS 121-82-4	MW 222.1163	C3H6N6O6		00
DRE-LA14204000AL DRE-GA09011099AL	Hexogen 10 µg/mL in Aceto Hexogen (RDX) 100 µg/mL	onitrile in Acetonitrile(‡)(*)	1ml 1ml	0 ^{×^N[*]} N [×] N ^{N[*]} N [*] 0 ⁻
4-Hexylphenol				
CAS 2446-69-7	MW 178.2707	C ₁₂ H ₁₈ O		
DRE-C14209000	4-n-Hexylphenol(‡)		100mg	HO
Hydroquinone (Ber	nzene-1,4-diol)			
CAS 123-31-9	MW 110.1106	C ₆ H ₆ O ₂		
DRE-C14223000	Hydroquinone(‡)		250mg	НО ОН
2-Hydroxydiphenyl	methane			
CAS 28994-41-4	MW 184.2338	C13H12O		ОН
DRE-C14231500	2-Hydroxydiphenylmethane		500mg	
2-Hydroxy-4-nitroa	niline			
CAS 121-88-0	MW 154.1234	C6H6N2O3		0
DRE-C14234100	2-Hydroxy-4-nitroaniline		250mg	H ₂ N OH
2-Hydroxy-5-nitroa	niline			
CAS 99-57-0	MW 154.1234	C ₆ H ₆ N ₂ O ₃		Q
DRE-C14234200	2-Hydroxy-5-nitroaniline		250mg	H ₂ N
4-Hydroxy-2-nitroa	niline			
CAS 610-81-1	MW 154.1234	$C_6H_6N_2O_3$		ОН
DRE-C14234800	4-Hydroxy-2-nitroaniline		100mg	NH ₂ O

Product code	Description			
Isononylphenol-etho	oxylate (technical mixture	e)		
CAS 37205-87-1	MW n/a			
DRE-C14438000	Isononylphenol-ethoxylate (t	iechnical)	100mg	No Structure
4-iso-Octylphenol-di	-ethoxylate			
CAS 2315-61-9	MW 294.429	С18Н30О3		<pre> ⁰ ></pre>
<u>DRE-C15712802</u> <u>DRE-LA15712802AC</u>	4-iso-Octylphenol-di-ethoxyl 4-iso-Octylphenol-di-ethoxyl	ate ate 10 μg/mL in Acetone(‡)	10mg 1ml	Х ОН
4-iso-Octylphenol-m	ono-ethoxylate			
CAS 2315-67-5	MW 250.3764	C ₁₆ H ₂₆ O ₂		
DRE-LA15712806AC	4-iso-Octylphenol-mono-eth	oxylate 10 µg/mL in Acetone	1ml	HONO
N-Isopropylaniline				
CAS 768-52-5	MW 135.2062	C₀H₁₃N		н
<u>DRE-C14463100</u>	N-Isopropylaniline		250mg	Ň
4-Isopropyl-3-methy	Iphenol			
CAS 3228-02-2	MW 150.2176	C10H14O		
<u>DRE-C14463650</u>	4-Isopropyl-3-methylphenol(‡)	100mg	но
2-Isopropylphenol				
CAS 88-69-7	MW 136.191	С9Н12О		ОН
DRE-C14463900	2-Isopropylphenol(‡)		250mg	
3-Isopropylphenol				
CAS 618-45-1	MW 136.191	С9Н12О		
DRE-C14464000	3-Isopropylphenol		250mg	но
4-Isopropylphenol				
CAS 99-89-8	MW 136.191	C₀H₁₂O		HO、
<u>DRE-C14464100</u>	4-Isopropylphenol(‡)		250mg	
4-Methoxyphenol				
CAS 150-76-5	MW 124.1372	C7H8O2		<i>c</i> 0
DRE-C15081450	4-Methoxyphenol		100mg	но

Product code	Description			
N-Methylaniline				
CAS 100-61-8	MW 107.1531	СтНэN		н
<u>DRE-C15083770</u>	N-Methylaniline(‡)		250mg	Ň.
3-Methyl-2-nitrophe	nol			
CAS 4920-77-8	MW 153.1354	C7H7NO3		λ
DRE-C15109000	3-Methyl-2-nitrophenol		100mg	°,N ⁺ −°,N ⁺ HO
4-Methyl-2-nitrophe	nol			
CAS 119-33-5	MW 153.1354	CrHrNO3		• 0H
DRE-C15110800	4-Methyl-2-nitrophenol		100mg	
2-Methylphenol D8				
CAS 203645-65-2	MW 116.1871	C7²H8O		² H
DRE-C15140210	2-Methylphenol D8(‡)		25mg	^{2}H ^{2}H ^{2}H ^{2}H ^{2}H ^{2}H ^{2}H
2-Methylphenol (o-C	Cresol)			
CAS 95-48-7	MW 108.1378	С7Н8О		
DRE-C15140200 DRE-XA15140200ME	2-Methylphenol(‡) 2-Methylphenol 100 μg/mL ii	n Methanol(‡)	500mg 1ml	OH
3-Methylphenol Ace	tate			
CAS 122-46-3	MW 150.1745	C9H10O2		
DRE-C15140313	3-Methylphenol acetate		250mg	
4-Methylphenol (p-C	Cresol)			
CAS 106-44-5	MW 108.1378	С7НвО		
DRE-C15140400 DRE-L15140400ME DRE-XA15140400CY	4-Methylphenol(‡) 4-Methylphenol 10 μg/mL in 4-Methylphenol 100 μg/mL ii	Methanol n Cyclohexane	500mg 10ml 1ml	ОН
2-(1-Methyl-1-pheny	/lethyl)-4-(1,1,3,3-tetram	nethylbutyl)-6-(benzotriazol-2-yl)phenol		
CAS 73936-91-1	MW 441.6077	C ₂₉ H ₃₅ N ₃ O	-	$\rightarrow \sim$
DRE-C15140700	2-(1-Methyl-1-phenylethyl)-4 phenol	-(1,1,3,3-tetramethylbutyl)-6-(benzotriazol-2-yl)	100mg	
Methylphenylmaloni	c Acid			
CAS 4371-02-2	MW 194.184	C10H10O4		О、ОН
DRE-C15140780	Methylphenylmalonic acid		50mg	ОН

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Product code	Description			
2-Nitroaniline				
CAS 88-74-4	MW 138.124	C6H6N2O2		∧ NH₂
DRE-C15554200	2-Nitroaniline(‡)		250mg	
			0	N ⁺ O
				0
3-Nitroaniline				
CAS 99-09-2	MW 138.124	C6H6N2O2		NH ₂
DRE-C15554300	3-Nitroaniline(‡)		250mg	
			5	
				⁻ 0 ⁻ ^N ≈0
4-Nitroaniline				
CAS 100-01-6	MW 138.124	CeHeN2O2		∧ NHa
DRE-C15554400	4-Nitroaniline(±)		250ma	-
			5	° N ⁺
				ö
2-Nitrobenzaldehyde	9			
CAS 552-89-6	MW 151.1195	C7H5NO3		0
DRE-C15556500	2-Nitrobenzaldehyde(±)		100mg	- O +
			5	0 ⁻ 0
Nitrobenzene				
CAS 98-95-3	MW 123.1094	CeHsNO2		
DRE-C15557000	Nitrobenzene(±)		250ma	0 1 1
DRE-CA15557000	Nitrobenzene(‡)		250mg	
DRE-L15557000ME	Nitrobenzene 10 µg/mL in M	ethanol	10ml	
DRE-XA15557000ME	Nitrobenzene 100 µg/mL in I	Vlethanol	1ml	
Nitrobenzene 13C6				
CAS 89059-37-0	MW 129.0653	¹³ C ₆ H ₅ NO ₂		0
DRE-A15557150ME-100	Nitrobenzene 13C6 100 µg/r	nL in Methanol(‡)	1ml	$^{13}C_{13}$ $^{13}C_{13}$ $^{13}N_{13}^{+}$
				¹³ G ₂ ¹³ C
				-13C>C
Nitrobenzene D5				
CAS 4165-60-0	MW 128.1402	C6²H₅NO₂		² H O ⁻
DRE-C15557100	Nitrobenzene D5(‡)		1g	² H N ⁺ 0
DRE-XA15557100AC	Nitrobenzene D5 100 µg/mL	in Acetone(‡)	1ml	² H ² H
DRE-A15557100ME-	Nitrobenzene D5 2000 µg/m	L in Methanol(‡)	1ml	² H
2000				
2-Nitrobenzoic Acid				
CAS 552-16-9	MW 167.1189	C7H₅NO₄		0
DRE-C15557400	2-Nitrobenzoic acid		100mg	
				но
				ö
4-Nitrobenzoic Acid				
CAS 62-23-7	MW 167.1189	C7H₅NO₄		Q
DRE-C15557600	4-Nitrobenzoic acid(‡)		100mg	С
				⁻ 0, N ⁺
				ö

Product code	Description			
2-Nitrobiphenyl				
CAS 86-00-0	MW 199.2054	C12H9NO2		⁻⁰ , ⁺⁰
DRE-C20963200	2-Nitrobiphenyl		100mg	
DRE-L20963200CY	2-Nitrobiphenyl 10 µg/mL in	Cyclohexane	10ml	
4-Nitrobiphenyl				
CAS 92-93-3	MW 199.2054	C12H9NO2		0-
DRE-C20963400	4-Nitrobiphenyl		100mg	0 ^{-,N+}
DRE-L20963400CY	4-Nitrobiphenyl 10 µg/mL in	Cyclohexane	10ml	
2-Nitrodiphenylamin	e			
CAS 119-75-5	MW 214.22	C ₁₂ H ₁₀ N ₂ O ₂		⁻ 0 _N +0
DRE-C15559200	2-Nitrodiphenylamine(‡)		100mg	N N
4-Nitrodiphenvlamine				
CAS 836-30-6	- MW 214.22	C12H10N2Q2		0
DRE-C15559400	4-Nitrodiphenylamine(‡)		100mg	
				н
Nitroguanidine				
CAS 556-88-7	MW 104.0681	CH₄N₄O₂		н
DRE-XA15588000AL	Nitroguanidine 100 µg/mL in	Acetonitrile(‡)	1ml	^O ^N ⁺ ^N ^N ^H ²
				о́− йн
4-Nitroimidazole				
CAS 3034-38-6	MW 113.0748	C3H3N3O2		
DRE-C15588300	4-Nitroimidazole(‡)		100mg	O,NH
				O N=
Nitromide				
CAS 121-81-3	MW 211.1317	C7H5N3O5	250	o _{≈N+} o⁻
DRE-C15588500	Nitromide		250mg	0
				NH ₂ O
Nitropenta (Pentaerythritol tetranitrate)				
CAS 78-11-5	MW 316.1366	C5H8N4O12		° _{°N+} 0 ⁻
DRE-LA15589000AL	Nitropenta 10 µg/mL in Acete	onitrile	1ml	
				0 N *
				0°″`o-
CAS 88-75-5	MW 139.1088	C ₆ H ₅ NO ₃	F00:	ОН О
DRE-C15590200 DRE-XA15590200ME	2-INITrophenol(‡) 2-Nitrophenol 100 µg/mL in I	Methanol	500mg 1ml	N ₀
	, 10			