

NITROSAMINES & NDSRI (GENOTOXIC STANDARDS)



[Ready Stock Inventory]



CLEANCHEM LABORATORIES LLP

Plot No. A-737/2, TTC.Industrial Area, MIDC, Khairane, Navi Mumbai, Maharashtra, INDIA 400710

✉ sales@cleanchemlab.com

☎ +91-9324132198

🌐 www.cleanchemlab.com

Cleanchem at a Glance

- **Contract Research Organization (CRO / CDMO / CRAMS)**
- **Custom Technology Development**
- ***R&D Based* Products & Services to Pharma, Chemical & allied industries**
- **Since 7 years of dedicated services to *300+ clients* Worldwide**
- ***World class R&D facility* of 20,000 Sq.Ft area with 60+ scientists**
- **4000+ Impurities and Reference Standards in *Ready stock***
- **Largest Inventory of *Genotoxic Standards* around the globe**
- **Pioneer in development of *Nitrosoamines and Azido Standards***



ISO 17034:2016
General Requirements for the Competence of
Reference Material Producers



PRODUCTS

- **Impurity References Standard**
- **Working Standard**
- **Nitrosamine (Genotoxic standards)**
- **Metabolites & Glucoronides**
- **Agrochemical Standards**
- **API Intermediates**
- **Catalytic Application**

SERVICES

- **Custom Synthesis (CRAMS)**
- **Contract Research and Custom Technology Development**
- **Unknown Impurity Isolation & Identification**
- **Short Path Distillation (SPDU)**
- **High Temperature & Pressure Reaction**

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Services we offer

CUSTOM SYNTHESIS SERVICES

- Custom Synthesis (CRAMS)
- KSM & API Intermediate Development
- Drug Discovery – NCE Library Synthesis
- Contract Research and Technology Development
- Eco-friendly Process Development
- High Temperature & Pressure Reactions



PURIFICATION SERVICES

- Preparative HPLC Purification
- Flash Chromatography Purification
- Silica & Resin Based Chromatographic Purification
- Unknown Impurity Isolation, Characterization & Identification
- Short Path Distillation



ANALYTICAL SERVICES

- LCMS-MS Analysis Triple Quadruple
- Direct Mass analysis
- LCMS/MS method development
- HPLC Routine Analysis
- HPLC Method Development
- GC Routine Analysis
- GCMS/ GC Method Development



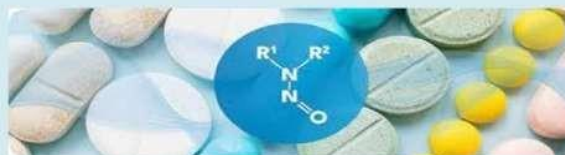
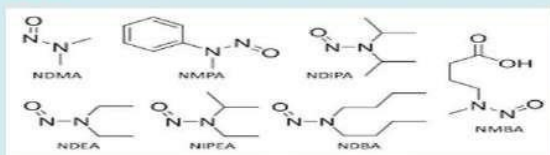
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Nitrosamines & Genotoxic Standards

- **Pioneer** in Development of **Nitrosamine** Standards
- USFDA has identified cancer causing NDMA in **Ranitidine** & **Losartan**, and many more drugs
- NDMA is formed in several industrial processes
- FDA recommends that manufacturers to take action to quantify nitrosoamine levels
- **200+ genotoxic impurities** like NDMA, NDEA and NMBA impurities
- **Azido** compounds of Irbesartan, Losartan, Valsartan, Olmesartan



Sr. No.	Material Name	Abbr	CAS No.	Sr No.	Material Name	Abbr	CAS No.
1	N-Nitroso Di- Ethyl Amine	NDEA	55-18-5	13	N- Nitroso Methyl Butyl Amine	NMBA	7068-83-9
2	N-Nitroso Di methyl Amine	NDMA	62-75-9	14	N- Nitroso Methyl Isopropyl Amine	NMIPA	30533-08-5
3	N-Nitroso Di- isopropyl Amine	NDIPA	601-77-4	15	N-Nitroso Isopropyl Ethyl Amine	NEIPA	16339-04-1
4	N- Nitroso Piperidine	NPIP	100-75-4	16	N- Nitroso Piperazine	NPIPZB	140-79-4
5	N- Nitroso Dibutyl Amine	NDBA	924-16-3	17	N-Nitroso Piperazine (Monomer)	NPIPZM	5632-47-3
6	N-Nitroso Pyrrolidine	NPYRN	930-55-2	18	N- Nitroso Di-N-Propyl Amine	NDPA	621-64-7
7	N-Nitroso Morpholine	NMOR	59-89-2	19	N-Nitroso N-Benzyl Methyl Amine	NBMA	937-40-6
8	N - Nitroso Ethyl Methyl Amine	NMEA	10595-95-6	20	N- Nitroso 2.6 Dichloro purine	NDCP	5451-40-1
9	N- Nitroso Methyl Piperazine	NMPIPZ	16339-07-4	21	N- Nitrosodiphenylamine	NDPHA	86-30-6
10	N- Nitroso- 4 Methyl Amino Butyric Acid	NMBA	61445-55-4	22	N- Nitroso Dibenzylamine	NDBzA	5336-53-8
11	N- Nitroso N-Ethyl Aniline	NEPhA	612-64-6	23	N- Nitroso Diamyl Amine	NDA	13256-06-09
12	N- Nitroso N-Methyl Aniline	NMA	614-00-6	24	N- Nitroso Ethyl Propyl Amine	NEIA	25413-61-0

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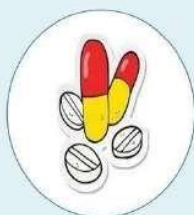
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Our Products

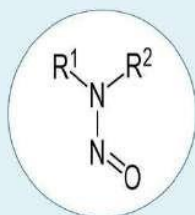
- Impurity References Standard
- Working Standard
- Nitrosamine & Azido Standards
- Metabolites
- Glucuronides
- API Intermediates & KSM
- Agrochemical Standards
- Catalyst / Catalytic application
- Bile Salts



Our Strength



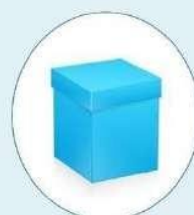
4000+
Impurities
Ready Stock



200+
Nitrosoamine
Ready Stock



300+ Clients
Worldwide



Assurance of
Packaging



Quick
Delivery

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- Impurity Synthesis
- FTE Services
- KSM Synthesis
- API Intermediate Development
- Drug Discovery – NCE Library Synthesis
- Contract Research & Technology Development
- Eco-friendly Process Development
- High Temperature & Pressure Reactions



Certifications



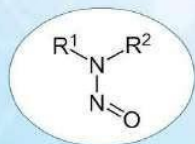
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General Requirements for the Competence of
Reference Material Producers



Our Strength



**4000+ Impurities
Ready Stock**



**200+ Nitrosoamine
Ready Stock**



**300+ Clients
Worldwide**



**Assured
Packaging**



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Delivery**

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Advanced Purification Services

- **Preparative HPLC Purification**
- **Flash Chromatography Purification**
- **Silica Based Chromatographic Purification**
- **Resin Based Chromatographic Purification**
- **Unknown Impurity Isolation & Identification**
- **Short Path Distillation**
- **Purification of Fermentation Products**
- **Purification of Natural Products**
- **Purification of Peptides & Proteins**



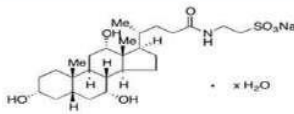
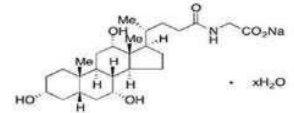
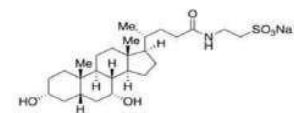
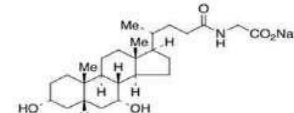
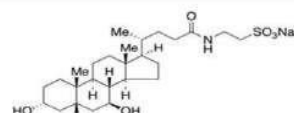
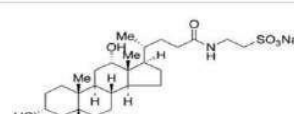
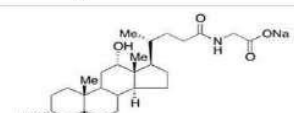
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Bile Salts



Sr. No	Bile Salt	Structure
1	Sodium Taurocholate Chemical name: Taurocholic Acid Sodium Salt Hydrate CAS No. 345909-26-4	
2	Sodium Glycocholate Chemical name: Glycocholic Acid Hydrate Sodium Salt CAS No. 345909-26-4	
3	Sodium Taurochenodeoxycholate Chemical name: Taurochenodeoxycholic Acid Sodium Salt CAS No. 6009-98-9	
4	Sodium Glycochenodeoxycholate Chemical name: Glycochenodeoxycholic Acid Sodium Salt CAS No. 16564-43-5	
5	Sodium Tauroursodeoxycholate Chemical name: Tauroursodeoxycholic Acid Sodium Salt CAS No. 35807-85-3	
6	Sodium Taurodeoxycholate Chemical name: Taurodeoxycholic Acid Sodium Salt CAS No. 207737-97-1	
7	Sodium Glycodeoxycholate Chemical name: Glycodeoxycholic Acid Sodium Salt CAS No. 16409-34-0	

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Our Esteemed Clients





 ISO 17034:2016
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Ministry of MSME, Govt. of India

INTRODUCTION

The manufacturers of API's and drug products should take steps to detect and prevent unacceptable levels of nitrosamine impurities in pharmaceutical products.

FDA has been investigating the presence of nitrosamine impurities in certain drug products. Since 2018, several drug products including ARBs, ranitidine, nizatidine, and metformin have been found to contain unacceptable levels of nitrosamines.

The discovery of nitrosamines in some types of drug products led FDA and other international regulators to conduct a detailed analysis of these impurities in affected APIs and drug products.

In June 2018, FDA was informed of the presence of an impurity identified as Nitrosodimethylamine (NDMA) in the ARB valsartan

Through investigation, the Agency determined that numerous lots of valsartan and a few other ARB drug products from different manufacturers contained unacceptable levels of nitrosamines.

The drug manufacturers voluntarily recalled the affected batches of these drugs.

In December 2019, FDA became aware that some metformin diabetes medicines in other countries were reported to have NDMA.

Based on that testing, FDA requested that identified applicants voluntarily recall these lots of the extended-release metformin.

In May 2020, further FDA testing revealed that certain lots of metformin extended-release formulation contained NDMA above the Agency's recommended acceptable intake limit.

FDA continues to investigate possible NDMA impurities in metformin and other drug and will advise companies on appropriate action. Based on the Agency's current understanding, this guidance discusses potential root causes of nitrosamine formation and advises API and the drug manufacturers that they should

1. Conduct risk assessments of their approved or marketed products and products with pending applications
2. Take appropriate actions to reduce or prevent the presence of nitrosamines in APIs and drug

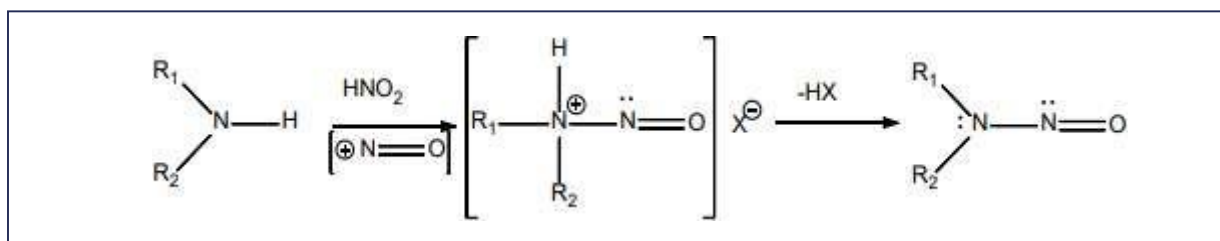
General Root Causes for the Presence of Nitrosamine Impurities in APIs

1. General Conditions That Lead to Nitrosamine Formation
 - Formation of nitrosamines is possible in the presence of secondary, tertiary, or quaternary amines and nitrite salts under acidic reaction conditions
 - Under these conditions, nitrite salts may form nitrous acid, which can react with an amine to form a nitrosamine
2. Sources of Secondary, Tertiary, and Quaternary Amines That Can Form Nitrosamines
 - The API intermediates, or starting materials may contain secondary or tertiary amine functional groups.
 - Tertiary and quaternary amines may also be added intentionally as reagents or catalysts.
 - All of these types of amines can react with nitrous acid or other nitrosating agents to form nitrosamines
3. Contamination in Vendor-Sourced Raw Materials
 - Nitrosamine impurities can be introduced when vendor-sourced materials, including starting materials and raw materials, are contaminated.
 - Nitrosamine contamination has occurred when fresh solvents (ortho-xylene, toluene, and methylene chloride) were contaminated during shipment from vendors

Nitrosamine Impurities

The term nitrosamine describes a class of compounds having the chemical structure of anitroso group bonded to an amine ($R_1N(-R_2)-N=O$)

The Representative Reaction to Form Nitrosamines is mentioned below-



Nitrosamine compounds are potent genotoxic agents in several animal species and some are classified as probable or possible human carcinogens by the International Agency for Research on Cancer (IARC).

The guidance recommends control of any known mutagenic carcinogen, such as nitroso-compounds, at or below a level such that there would be a negligible human cancer risk associated with the exposure to potentially mutagenic impurities

FDA recommended that manufacturers take action to quantify nitrosamine levels in their drugs and to reduce or remove these impurities when above the interim limit.

FDA has used the interim limits to guide immediate decision-making for additional evaluation and product recalls while balancing the risks of potential long-term carcinogen exposure with disruption to clinical management of patients.

FDA has identified seven nitrosamine impurities that theoretically could be present in drug products:

N-Nitrosodimethylamine (NDMA)

N-Nitrosodimethylamine (NDEA)

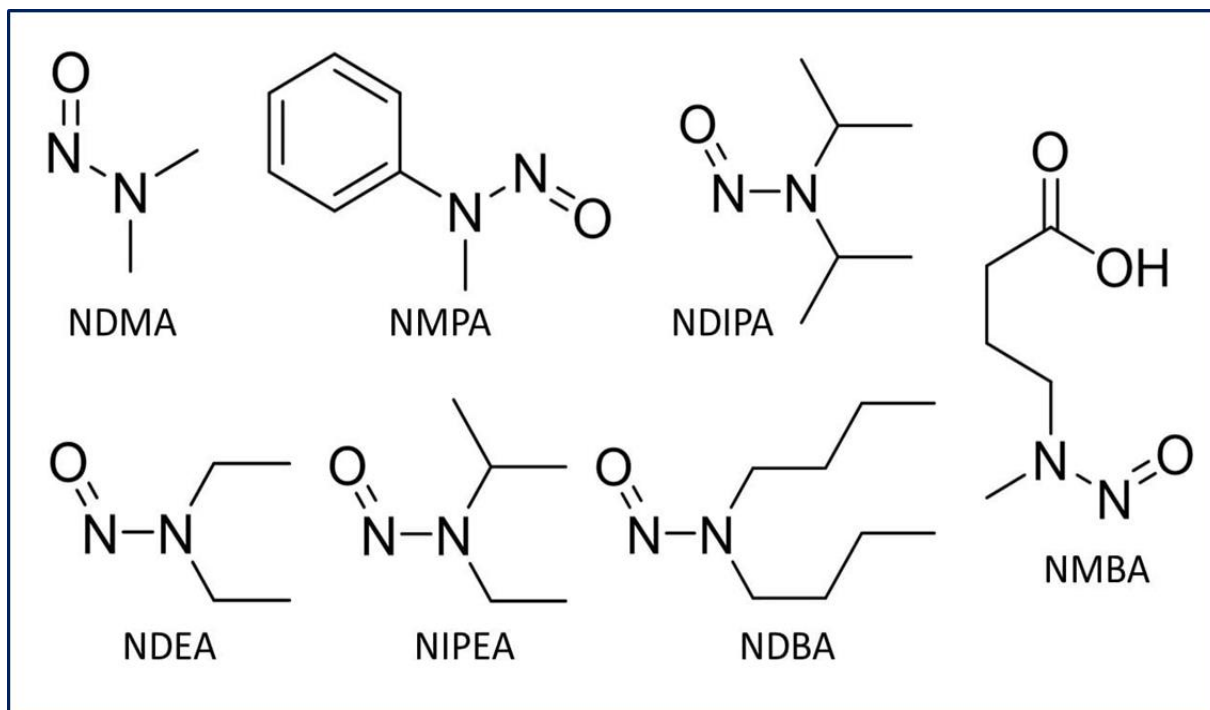
N-nitroso-N-methyl-4-aminobutanoic acid (NMBA)

N-nitrosoisopropylethyl amine (NIPEA)

N-nitrosodiisopropylamine (NDIPA)

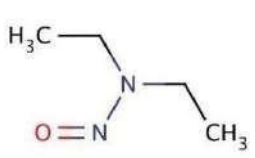
N-nitrosodibutylamine (NDBA)

N-nitrosomethylphenylamine (NMPA)



CERTIFICATE OF ANALYSIS

Date: 15-06-2022

Product Name	N-Nitrosodiethylamine(NDEA)		
Chemical name	N-Ethyl-N- nitrosoethanamine		
Structure			
Batch No.	CL-50-NDEA-15	CAS No.	55-18-5
Analysis Date:	April-2022	Retest Date:	March-2024
Mol. Formula	C ₄ H ₁₀ N ₂ O	Molecular Wt.	102.14
Long term Storage Condition	Store at 2-8 °C in well closed container under Nitrogen		
Handling and Transit condition	25-30 °C in well closed container under Nitrogen		

Test	Result
Appearance	Yellow liquid
Solubility	Chloroform
¹ HNMR	Conforms to structure
¹³ CNMR	Conforms to structure
MASS	Conforms to structure
FTIR	Conforms to structure
Non volatile impurity by TGA	0.0 %
Chromatographic purity	98.26 %
Potency	98.26 %
Potency = % Chromatographic purity- % Non volatile impurity by TGA=98.26 %-0.0 % = 98.26 %	
Note: N-Nitrosodiethylamine is a highly toxic semi-volatile organic compound and a suspected human carcinogen. Handle the material carefully with proper safety measures.	

	Prepared By	Checked By	Approved by
Signature			
Date			

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CL-50-NDEA-15_proton-1-2.jdf
045499



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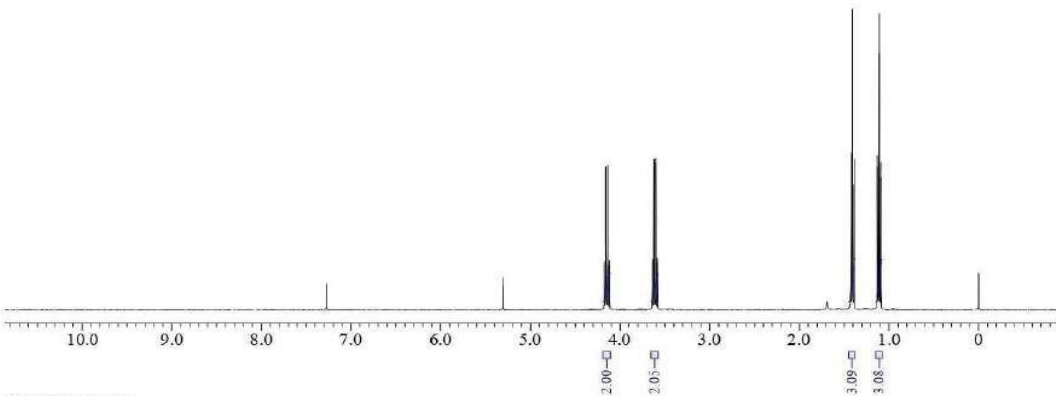
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ppm
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Instrument id  = NMR-01
Author        = anil146
Reviewed by   = Ramesh Yadav
Solvent       = CHLOROFORM-D
Spectrometer  = JNM-ECZ400S/L1
Experiment    = proton.jxp
Creation Time = 7-SEP-2020 15:59:47
Revision Time = 7-SEP-2020 17:57:40
Acquisition Parameter
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X_Offset      = 7[ppm]
X_Sweep       = 9.05576369[kHz]
Scans         = 16
Relaxation_Delay = 2[s]

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X : ppm : Proton

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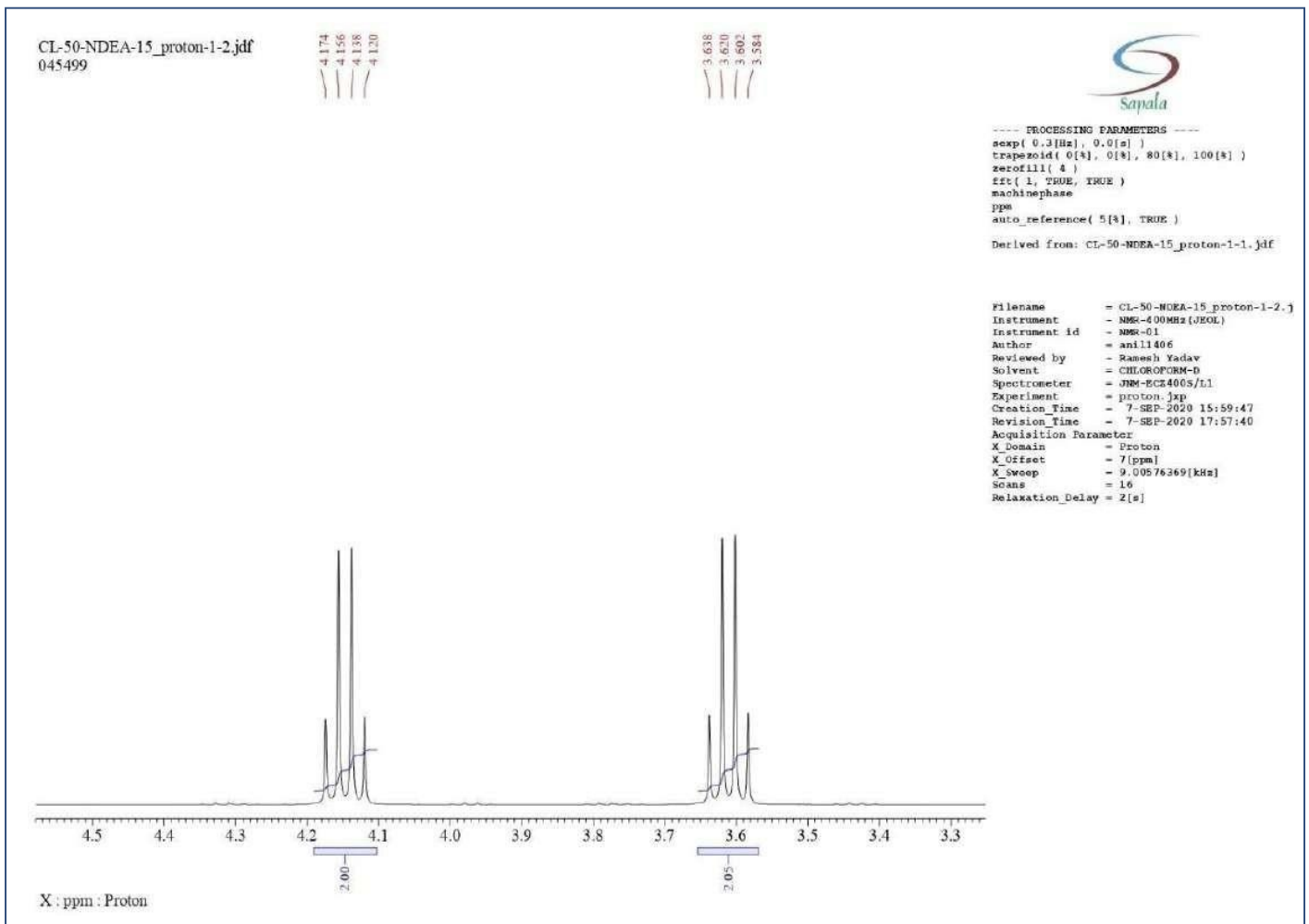
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CL-50-NDEA-15_proton-1-2.jdf
045499

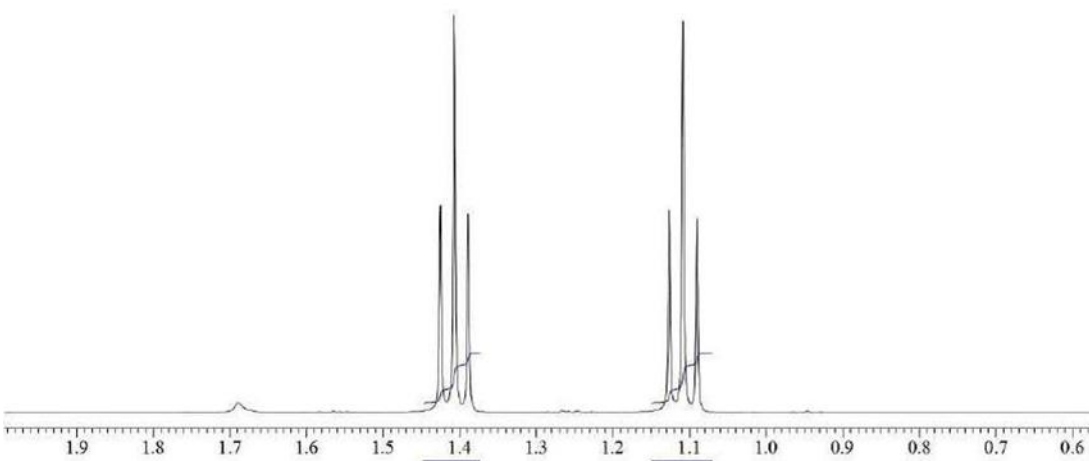
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1.407
1.389

1.127
1.109
1.091



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ppm
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Derived from: CL-50-NDEA-15_proton-1-1.jdf
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Instrument     - NMR-400MHz(JEOL)
Instrument Id  - NMR-01
Author        - anil1406
Reviewed by   - Ramesh Yadav
Solvent       - CHLOROFORM-D
Spectrometer  - JNM-ECZ400S/L1
Experiment    - proton.jxp
Creation Time - 7-SEP-2020 15:59:47
Revision Time - 7-SEP-2020 17:57:40
Acquisition Parameter
X_Domain      - Proton
X_Offset      - 7[ppm]
X_Sweep       - 9.00576369[kHz]
S0ans        - 16
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X : ppm : Proton

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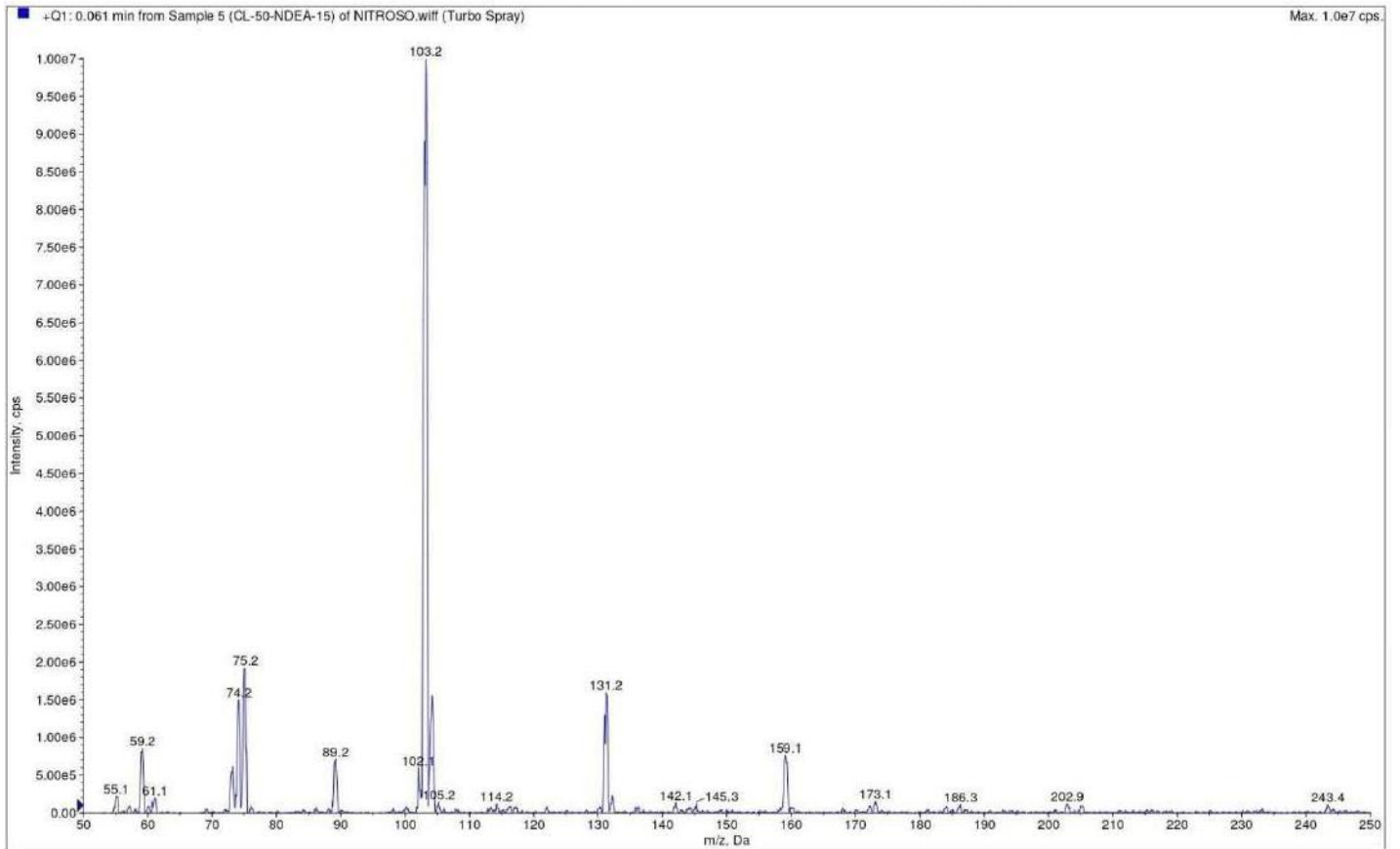
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Printing Date: 09/09/2020

Sample Name: CL-50-NDEA-15

Acq. Time: 16:07



Analysed By:

Operator: ADMN

Printing Date: 09/09/2020

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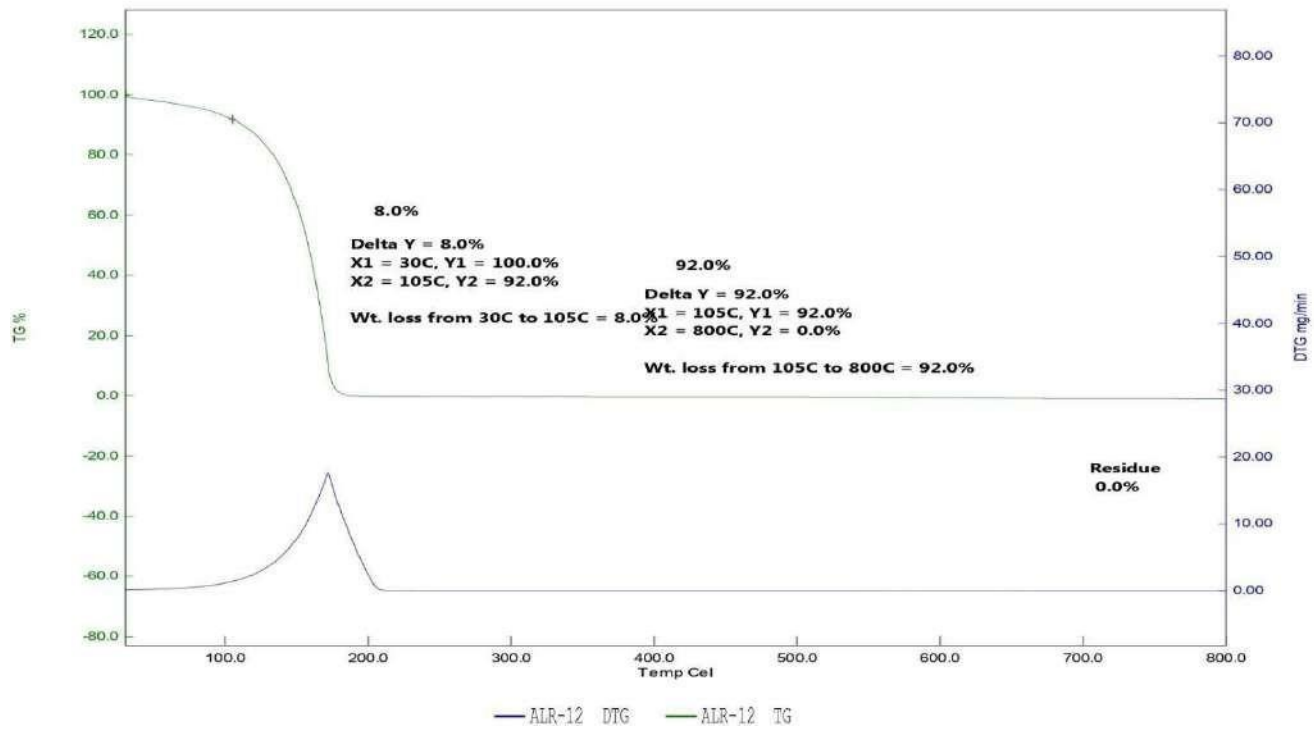
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Module: TGA
Data Name: ALR-12
Measurement Date: 9/9/2020
Sample Name: CL-50-NDEA-15
Sample Weight: 17.384 mg
Reference Name: Pt
Reference Weight: 0.000 mg

Temperature Program:
1* Cel Cel Cel/min min s
 30 800 10 0 0.5

Comment:
Operator: Dr RAO
Gas1: Nitrogen
Gas2:
Pan: Pt



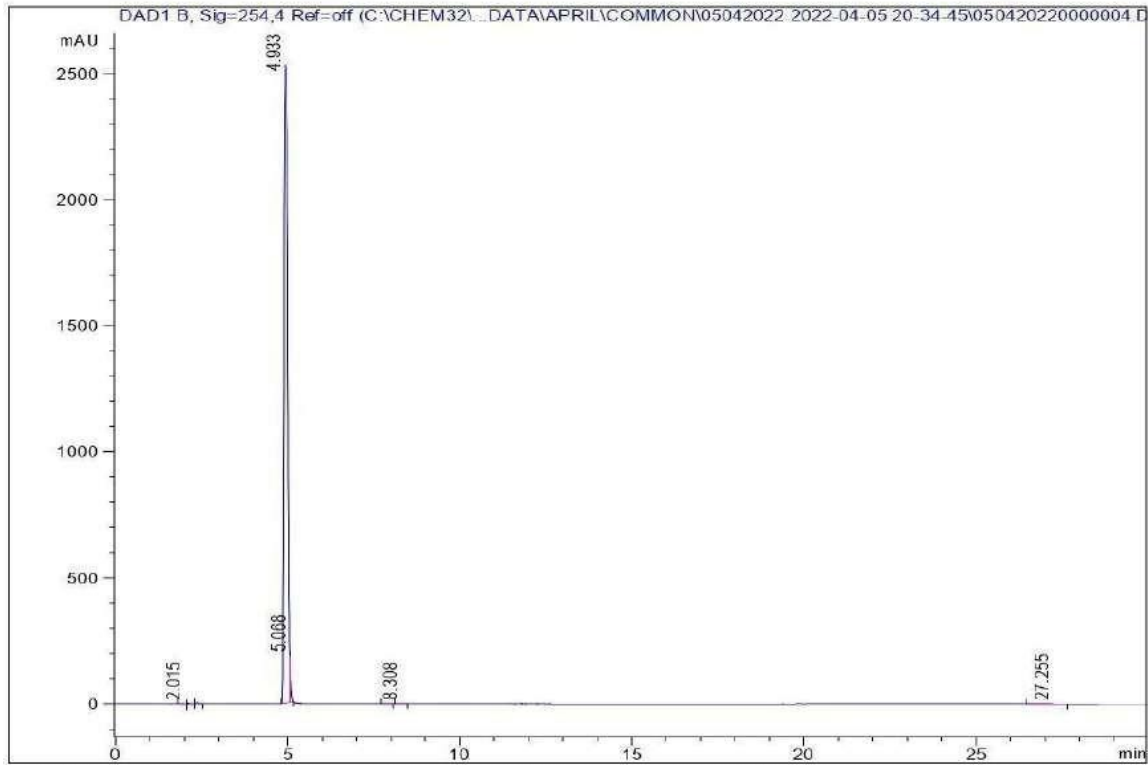
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Data file : C:\CHEM32\1\2022\DATA\APRIL\COMMON\05042022_2022-04-05_20-3->
Sample Name: CL-50-NDEA-15 1

Injection Date : 05-04-2022 Seq Line : 4
Injection Time : 22:10:18 Location : Vial 86
Sample Name : CL-50-NDEA-15 Inj. No. : 1
Inj. Vol. : 10 µl
Acq. Method : C:\Chem32\1\2022\DATA\APRIL\COMMON\05042022_2022-04-05_20->
Analysis Method : C:\CHEM32\1\2022\METHOD\APRIL\COMMON\INHOUSE.M



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2.00	2.12	4.58	29.23	0.14	
3.00	2.38	8.05	34.35	0.16	
4.00	4.93	2529.74	20762.64	98.26	NDEA
5.00	5.07	183.65	212.54	1.01	
6.00	7.91	1.38	11.77	0.06	
7.00	8.31	0.21	2.30	0.01	
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Instrument 1

06-04-2022

14:28:11

Page 1 of 2

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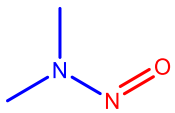
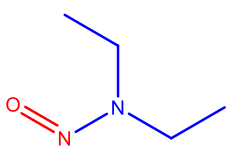
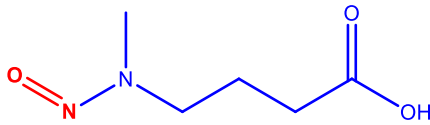
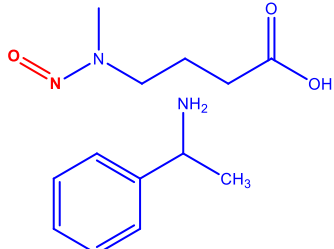
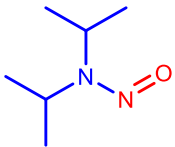
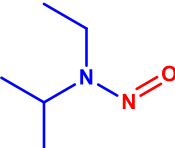
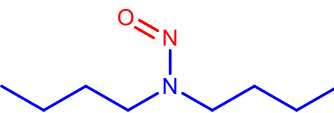
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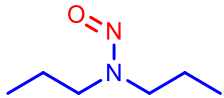
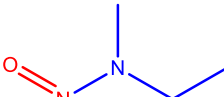
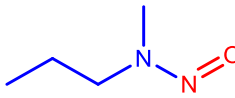
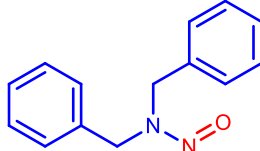
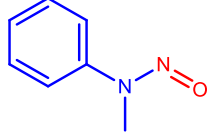
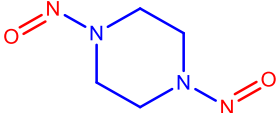
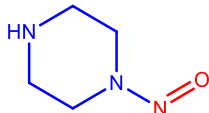
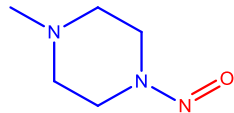
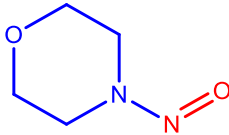
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SR. NO	NITROSOAMINE	PARENT API	STRUCTURE
1	N-Nitrosodimethylamine Chemical Name: N-Methyl-N-nitroso methanamine MF: C ₂ H ₆ N ₂ O MW: 74.08 CAS No: 62-75-9	Valsartan, Losartan and Irbesartan	
2	N-Nitrosodiethylamine (NDEA) Chemical Name: N-Ethyl-N-nitrosoethanamine MF: C ₄ H ₁₀ N ₂ O MW: 102.1 CAS No: 55-18-5	Valsartan, Losartan and Irbesartan	
3	N-Nitroso-N-methyl-4-aminobutyric Acid (NMBA) Chemical Name: 4-(Methylnitrosoamino)butanoic Acid MF: C ₅ H ₁₀ N ₂ O ₃ MW: 146.15 CAS No: 61445-55-4	Valsartan	
4	N-Nitroso-N-methyl-4-aminobutyric Acid PEA Chemical Name: 4-[methyl(nitroso)amino] butanoic acid-1-phenylethan-1-amine (1/1) MF: C ₁₃ H ₂₁ N ₃ O ₃ MW: 267.2 CAS No.: NA	Valsartan	
5	N-Nitrosodiisopropylamine (NDIPA) Chemical Name: N-(1-Methylethyl)-N-nitroso-2-propanamine MF: C ₆ H ₁₄ N ₂ O MW: 130.19 CAS No: 601-77-4	Valsartan	
6	N-Nitroso isopropyl ethylamine (NEIPA) Chemical Name: 1-Methyl-N-nitrosodiethylamine MF: C ₅ H ₁₂ N ₂ O MW: 116.16 CAS No: 16339-04-1	Valsartan	
7	N-Nitrosodibutylamine Chemical Name: N-Butyl-N-nitroso-1-butanamine Mol F C ₈ H ₁₈ N ₂ O MW: 158.3 CAS No: 924-16-3	Valsartan	



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8	N-Nitroso di n-Propyl amine Chemical Name: N-Nitroso-N-propyl-1-propanamine MF: C ₆ H ₁₄ N ₂ O MW: 130.19 CAS No: 621-64-7		
9	N-Nitrosoethylmethyamine Chemical Name: N-Methyl-N-nitrosoethanamine MF: C ₃ H ₈ N ₂ O MW: 88.1 CAS No: 10595-95-6		
10	N-Nitrosomethylpropylamine Chemical Name: N-Methyl-N-nitrosopropylamine MF: C ₄ H ₁₀ N ₂ O MW: 102.1 CAS No: 924-46-9		
11	N-Nitrosodibenzylamine Chemical Name: N,N-Dibenzylnitrosamine MF: C ₁₄ H ₁₄ N ₂ O MW: 226.27 CAS No: 5336-53-8		
12	N-Nitroso-N-methyl N- phenylamine Chemical Name: N-Methyl-N-nitrosoaniline MF: C ₇ H ₈ N ₂ O MW: 136.15 CAS No: 614-00-6		
13	N- Nitrosopiperazine DIMER Chemical Name: N,N'-Dinitrosopiperazine MF: C ₄ H ₈ N ₄ O ₂ MW: 144.1 CAS No: 140-79-4		
14	N- Nitrosopiperazine MONOMER Chemical Name: N-Mononitrosopiperazine MF: C ₄ H ₉ N ₃ O MW: 115.13 CAS No: 5632-47-3		
15	N-Methyl-N'-nitrosopiperazine Chemical Name: 1-Methyl-4-nitrosopiperazine MF: C ₅ H ₁₁ N ₃ O MW: 129.16 CAS No: 16339-07-4		
16	N-Nitroso Morpholine Chemical Name: 4-Nitrosomorpholine MF: C ₄ H ₈ N ₂ O ₂ MW: 116.12 CAS No: 59-89-2		

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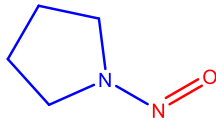
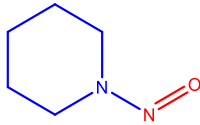
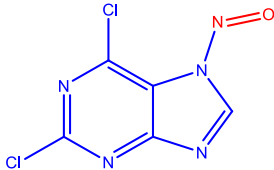
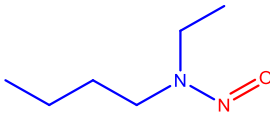
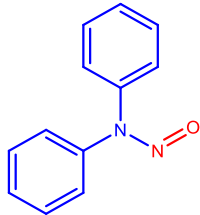
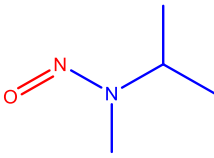
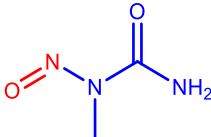
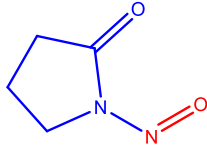
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17	<p>N-tert-Butyl-N-ethylnitrosamine Chemical Name: N-Ethyl-2-methyl-N-nitroso- 2-propanamine MF: C₆H₁₄N₂O MW: 130.18 CAS No: 3398-69-4</p>	
18	<p>N-(3-amino propyl)-N-methyl nitrosamine (NMPDA) Chemical Name: N-methyl-N-nitrosopropane-1,3-diamine MF: C₄H₁₁N₃O MW: 117.09 CAS No: NA</p>	
19	<p>N- Nitroso N-Ethyl N-Propyl Amine Chemical Name: N-Ethyl-N- nitrosopropylamine MF: C₅H₁₂N₂O MW: 116.16 CAS No: 25413-61-0</p>	
20	<p>N-Nitroso-N-ethylaniline Chemical Name: N-Ethyl-N-nitrosoaniline MF: C₈H₁₀N₂O MW: 150.18 CAS No: 612-64-6</p>	
21	<p>4-Nitroso methyl amino pyridine Chemical Name: N-methyl-N-pyridin-4-ylnitrous amide MF: C₆H₇N₃O MW: 137.1 CAS No: 16219-99-1</p>	
22	<p>N-Nitrosodiethanolamine Chemical Name: 2,2'-(Nitrosoimino) bisethanol MF: C₄H₁₀N₂O₃ MW: 134.13 CAS No: 1116-54-7</p>	
23	<p>N-Nitrosomethylethanolamine Chemical Name: 2-(Methylnitrosoamino) ethanol MF: C₃H₈N₂O₂ MW: 104.11 CAS No: 26921-68-6</p>	
24	<p>N-Nitrosomethylethanolamine Chemical Name: 2-(Methylnitrosoamino) ethanol MF: C₅H₁₂N₂O MW: 116.2 CAS No: 7068-83-9</p>	
25	<p>N-Nitroso N-Benzyl Methyl Amine Chemical Name: N-benzyl-N-methylnitrous amide MF: C₈H₁₀N₂O MW: 150.18 CAS No: 937-40-6</p>	



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26	N-Nitroso pyrrolidine Chemical Name: 1-Nitrosopyrrolidine MF: C ₄ H ₈ N ₂ O MW: 100.12 CAS No: 930-55-2	
27	N-N-Nitrosopiperidine Chemical Name: 1-Nitrosopiperidine MF: C ₅ H ₁₀ N ₂ O MW: 114.15 CAS No: 100-75-4	
28	N-Nitroso-2,6-dichloro purine Chemical Name: N-Nitroso -2,6 dichloro purine MF: C ₅ HCl ₂ N ₅ O MW: 218.0 CAS No: NA	
29	N-Ethyl-N-Butylnitrosamine Chemical Name: N-Ethyl-N-nitroso-1-butanamine MF: C ₆ H ₁₄ N ₂ O MW: 130.19 CAS No: 4549-44-4	
30	N-Nitroso diphenyl amine Chemical Name: N,N-Diphenyl-N-nitrosoamine MF: C ₁₂ H ₁₀ N ₂ O MW: 198.22 CAS No: 86-30-6	
31	N-methyl-N-nitroso-2-Propanamine Chemical Name: N-methyl-N-propan-2- ylnitrous Amide; N-isopropyl-N-methylnitrous Amide; MF: C ₄ H ₁₀ N ₂ O MW: 102.14 CAS No: 30533-08-5	
32	N-nitroso N methyl urea Chemical Name: 1-Methyl-1-nitrosourea MF: C ₂ H ₅ N ₃ O ₂ MW: 103.08 CAS No: 684-93-5	
33	N-Nitroso 2-pyrrolidone Chemical Name: 1-Nitroso-2- pyrrolidinone MF: C ₄ H ₆ N ₂ O ₂ MW: 114.10 CAS No: 54634-49-0	

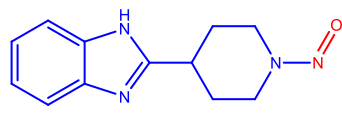
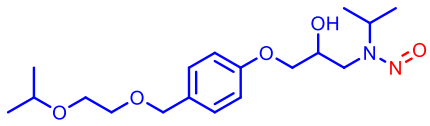
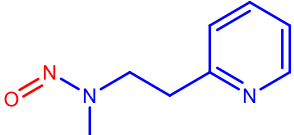
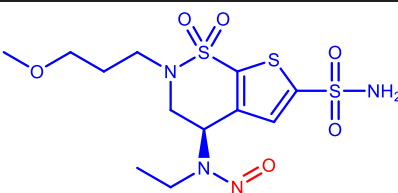
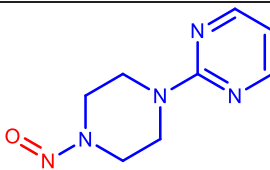
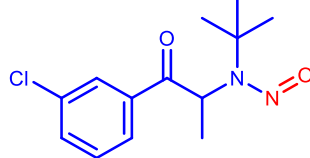
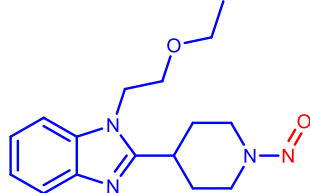
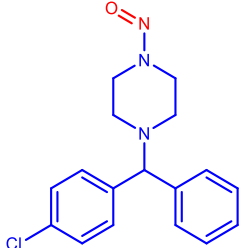


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34	<p>2-bromo-5-methyl-3-nitrosopyridine Chemical Name: 6-bromo-3-methyl-1-nitroso-1,2-dihydropyridine MF: C₆H₇BrN₂O MW: 203.4 CAS No: NA</p>		
35	<p>N-Nitroso Aceclofenac Chemical Name: 2-(2-(2-((2,6-Dichlorophenyl)(nitroso)amino)phenyl)acetoxy) acetic acid MF: C₁₆H₁₂Cl₂N₂O₅ MW: 383.2 CAS No: NA</p>	Aceclofenac	
36	<p>N-Nitroso Adrenaline Chemical Name: (R)-N-(2-(3,4-Dihydroxyphenyl)-2-hydroxyethyl)-N-methylnitrous amide MF: C₉H₁₂N₂O₄ MW: 212.2 CAS No. NA</p>	Adrenaline	
37	<p>N-Nitroso Atenolol Chemical Name: 2-(4-(2-hydroxy-3-(isopropyl(nitroso)amino)propoxy)phenyl)acetamide MF: C₁₄H₂₁N₃O₄ MW: 295.3 CAS No: 134720-04-0</p>	Atenolol	
38	<p>N-Nitroso Aripiprazole INT Chemical Name: 2-((4-cyanophenyl)(nitroso)amino)acetic acid M.F: C₉H₇N₃O₃ MW: 205.17 CAS No: NA</p>	Aripiprazole	
39	<p>N Nitroso Atomoxetine Chemical Name: (R)-N-methyl-N-(3-phenyl-3-(o-tolyloxy)propyl)nitrous amide MF: C₁₇H₂₀N₂O₂ MW: 284.35 CAS No: NA</p>	Atomoxetine HCL	

40	<p>N-Nitroso Azithioprine Chemical Name: 7-Nitroso-7H-purine-6-thiol MF: C₅H₃N₅OS MW: 181.2 CAS No: NA</p>	Azithioprine	
41	<p>N-nitroso Azithromycin impurity I Chemical Name: N-((2S,3R,4S,6R)-2-(((2R,3S,4R,5R,8S,10S,11S,12R,13R,14S)-2-ethyl-3,4,10-trihydroxy-13-(((2R,4R,5S,6S)-5-hydroxy-4-methoxy-4,6-dimethyltetrahydro-2H-pyran-2-yl)oxy)-3,5,6,8,10,12,14-heptamethyl-15-oxo-1-oxa-6-azacyclopentadecan-11-yl)oxy)-3-hydroxy-6-methyltetrahydro-2H-pyran-4-yl)-N-methylnitrosamide MF: C₃₇H₆₉N₃O₁₃ MW: 763.96 CAS No: NA</p>	Azithromycin	
42	<p>N-Nitroso-L-proline Chemical Name: N-Nitroso-L-proline MF: C₅H₈N₂O₃ MW: 144.13 CAS No: 7519-36-0</p>	Avanafil	
43	<p>N-Nitroso Proline Methyl Ester Chemical Name: Methyl Nitroso-L-prolinate MF: C₆H₁₀N₂O₃ MW: 158.2 CAS No: 35909-01-4</p>	Avanafil	
44	<p>N Nitroso Benazepril Chemical Name: 2-((S)-3-(((S)-1-Ethoxy-1-oxo-4-phenylbutan-2-yl)(nitroso)amino)-2-oxo-2,3,4,5-tetrahydro-1H-benzo[b]azepin-1-yl)acetic acid MF: C₂₄H₂₇N₃O₆ MW: 453.49 CAS No: NA</p>	Benazepril	
45	<p>N Nitroso Bumetanide Chemical Name: 3-(Butyl(nitroso)amino)-4-phenoxy-5-sulfamoylbenzoic acid MF: C₁₇H₁₉N₃O₆S MW: 393.4 CAS No: 2490432-02-3</p>	Bumetanide	

46	<p>N Nitroso Bilastine Chemical Name: 2-(1-nitrosopiperidin-4-yl)-1H-benzo(d)imidazole MF: C₁₂H₁₄N₄O MW: 230.27 CAS No: 2731008-04-9</p>	Bilastine	
47	<p>Bisoprolol Impurity 11 Chemical Name: N-(2-hydroxy-3-(4-((2-isopropoxyethoxy) methyl) phenoxy) propyl)-N-isopropyl nitrous amide MF: C₁₈H₃₀N₂O₅ MW: 354.4 CAS No: NA</p>	Bisoprolol	
48	<p>N-Nitroso Betahistine Chemical Name: N-Methyl-N-nitroso-2-pyridineethanamine MF: C₈H₁₁N₃O MW: 165.19 CAS No: 32635-81-7</p>	Betahistine	
49	<p>N-Nitroso Brinzolamide Chemical Name: (R)-4-(Ethyl(nitroso)amino)-2-(3-methoxypropyl)-3,4-dihydro-2H-thieno[3,2-e][1,2]thiazine-6-sulfonamide 1,1-dioxide MF: C₁₂H₂₀N₄O₆S₃ MW: 412.5 CAS No: NA</p>	Brinzolamide	
50	<p>Buspirone Impurity 1 Chemical Name: 2-(4-nitrosopiperazin-1-yl)pyrimidine MF: C₈H₁₁N₅O MW: 193.2 CAS No: 872826-80-7</p>	Buspirone	
51	<p>N Nitroso Bupropion Chemical Name: N-(tert-butyl)-N-(1-(3-chlorophenyl)-1-oxopropan-2-yl) nitrous amide MF: C₁₃H₁₇ClN₂O₂ MW: 268.74 CAS No: NA</p>	Bupropion	
52	<p>N-Nitroso Bilastine Chemical Name: 1-(2-Ethoxyethyl)-2-(1-nitrosopiperidin-4-yl)-1H-benzo[d]imidazole MF: C₁₆H₂₂N₄O₂ MW: 302.37 CAS No: NA</p>	Bilastine	
53	<p>N-Nitroso Cetirizine EP Impurity A Chemical Name: N-Nitroso(1,4-chlorobenzoydryl)Piperazine MF: C₁₇H₁₈ClN₃O MW: 315.8 CAS No: 2005-04-1</p>	Cetirizine	



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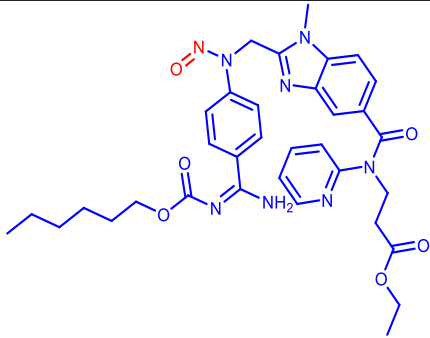
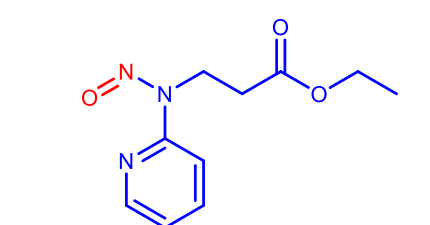
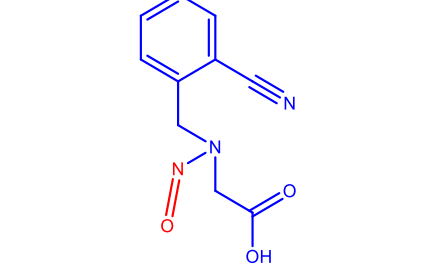
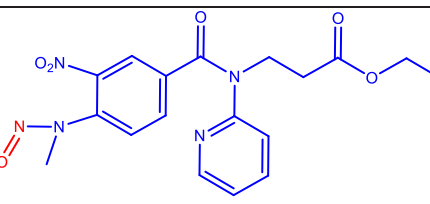
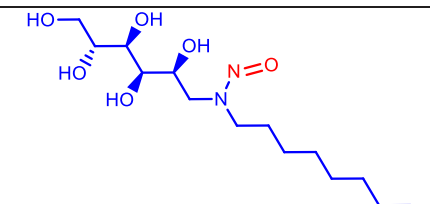
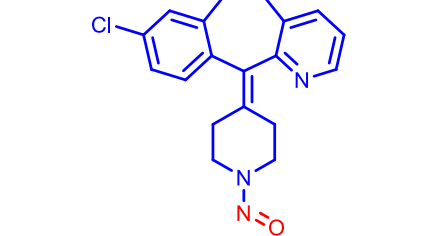
54	<p>Clopidogrel Nitroso Impurity Chemical Name: 5-Nitroso-4,5,6,7-tetrahydrothieno[3,2-c]pyridine MF: C₇H₈N₂O₂ MW: 168.2 CAS No: 2460755-43-3</p>	Clopidogrel	
55	<p>N Nitroso Clonidine Chemical Name: N-(2,6-Dichlorophenyl)-N-(4,5-dihydro-1H-imidazol-2-yl)nitrous amide MF: C₉H₈Cl₂N₄O MW: 259.1 CAS No: NA</p>	Clonidine	
56	<p>N Nitroso Cinacalcet Chemical Name: (R)-N-(1-(naphthalen-1-yl)ethyl)-N-(3-(3-(trifluoromethyl)phenyl)propyl)nitrous amide MF: C₂₂H₂₁F₃N₂O MW: 386.42 CAS No: NA</p>	Cinacalcet	
57	<p>N-Nitroso Ciprofloxacin Chemical Name: 1-Cyclopropyl-6-fluoro-1,4-dihydro-7-(4-nitroso-1-piperazinyl)-4-oxo-3-quinoline carboxylic Acid MF: C₁₇H₁₇FN₄O₄ MW: 360.3 CAS No: 864443-44-7</p>	Ciprofloxacin	
58	<p>N-Nitroso Clozapine Chemical Name: 8-chloro-11-(4-methylpiperazin-1-yl)-5-nitroso-5H-dibenzo[b,e][1,4]diazepine MF: C₁₈H₁₈ClN₅O MW: 355.82 CAS No: 156632-03-0</p>	Clozapine	
59	<p>N-Nitroso-4-Hydroxy Carbazole Chemical Name: 9-nitroso-9H-carbazol-4-ol MF: C₁₂H₈N₂O₂ MW: 212.2 CAS No: 63779-86-2</p>	Carbazole	
60	<p>Nitroso-Epoxy Propoxy Carbazole Carvedilol Chemical Name: 9-Nitroso-4-(oxiran-2-ylmethoxy)-9H-carbazole MF: C₁₅H₁₂N₂O₃ MW: 268.3 CAS No: NA</p>	Carvedilol	

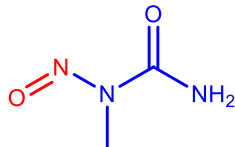
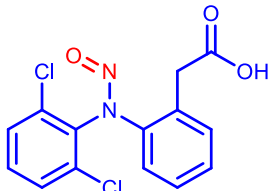
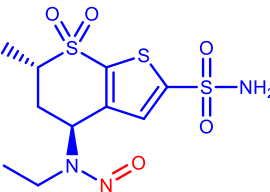
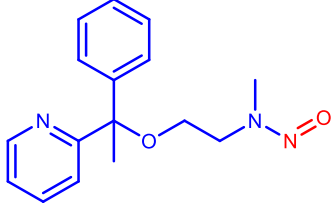
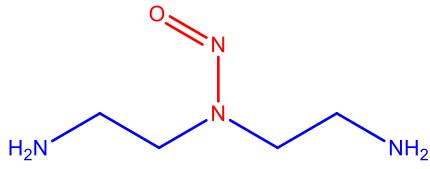
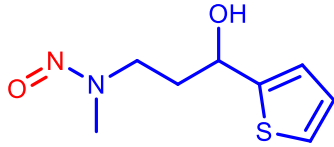
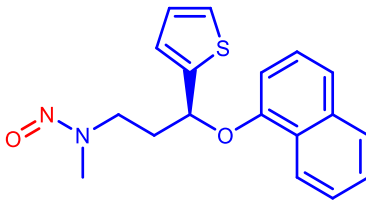


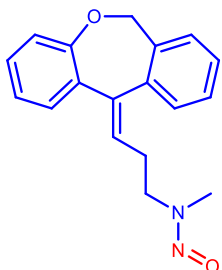
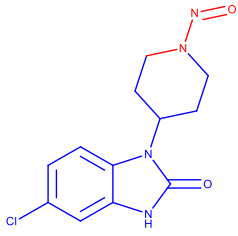
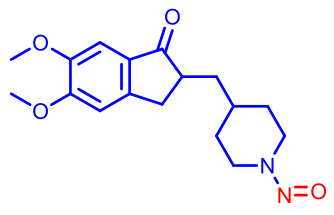
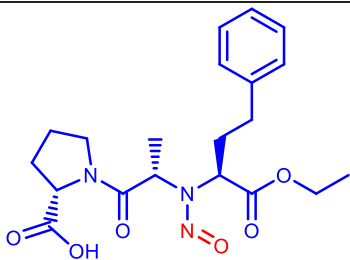
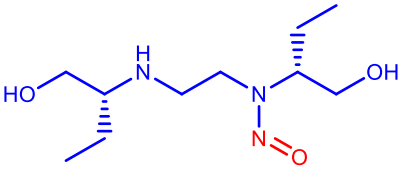
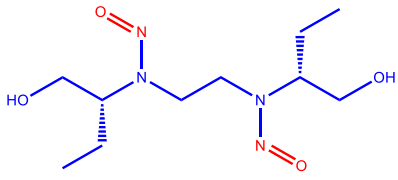
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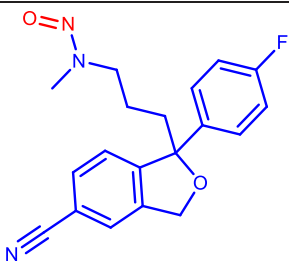
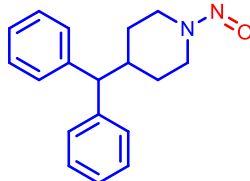
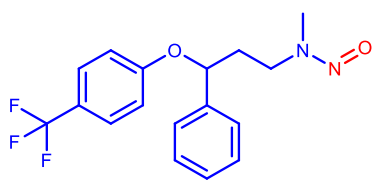
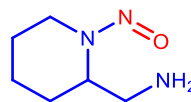

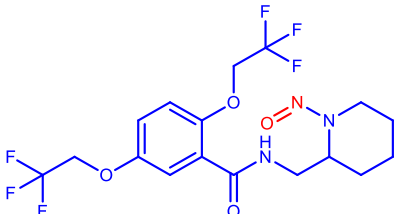
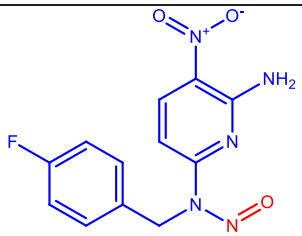
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61	<p>N-Nitroso Clomipramine Chemical Name: N-(3-(3-chloro-10,11-dihydro-5H-dibenzo[b,f]azepin-5-yl)propyl)-N-methylnitrous amide MF: C₁₈H₂₀ClN₃O MW: 364.3 CAS No. NA</p>	Clomipramine	
62	<p>N-Nitroso desmethyl Cyclobenzaprine Chemical Name: N-(3-(10,11-Dihydro-5H-dibenzo[a,d][7]annulen-5-ylidene)propyl)nitrous amide M.F: C₁₈H₁₈N₂O MW: 278.4 CAS No: NA</p>	Cyclobenzaprine	
63	<p>N-Nitroso Piperazine Chemical Name: 1-Nitrosopiperazine M.F: C₄H₁₀N₂O MW: 115.1 CAS No: NA</p>	Cyclobenzaprine	
64	<p>N-Nitroso Dabigatran Ethyl Ester Chemical Name: ethyl 3-(2-(((4-carbamimidoylphenyl)(nitroso)amino) methyl)-1-methyl-N-(pyridin-2-yl)-1H-benzo[d]imidazole-5-carboxamido)propanoate MF: C₂₇H₂₈N₈O₄ MW: 528.56 CAS No: NA</p>	Dabigatran	
65	<p>N Nitroso Dabigatran Impurity 1 Chemical Name: Ethyl 3-(2-(((4-(N-(hexyloxy)carbonyl)carbamimidoyl)phenyl)(nitroso)amino)methyl)-1-methyl-N-(pyridin-2-yl)-1H-benzo[d]imidazole-5-carboxamido)propanoate MF: C₃₄H₄₀N₈O₆ MW: 656.7 CAS No: NA</p>	Dabigatran	

66	<p>N Nitroso Dabigartan Etexilate Chemical Name: (E)-ethyl 3-(2-(((4-(N'-(hexyloxy)carbonyl)carbamimidoyl)phenyl)(nitroso)amino)methyl)-1-methyl-N-(pyridin-2-yl)-1H-benzo[d]imidazole-5-carboxamido)propanoate MF: C₃₄H₄₀N₈O₆ MW: 656.7 CAS No: NA</p>	Dabigatran	
67	<p>Dabigatran Nitroso Impurity 3 Chemical Name: Ethyl 3-(nitroso(pyridin-2-yl)amino)propanoate MF: C₁₀H₁₃N₃O₃ MW: 223.2 CAS No: NA</p>	Dabigatran	
68	<p>N-Nitroso Dabigatran INT Chemical Name: 2-((2-cyanobenzyl)(nitroso)amino)acetic acid M.F: C₁₀H₉N₃O₃ MW: 219.06 CAS No: NA</p>	Dabigatran	
69	<p>N-Nitroso Dabigatran IMP-8 Chemical Name: ethyl 3-(4-(methyl(nitroso)amino)-3-nitro-N-(pyridin-2-yl)benzamido)propanoate M.F: C₁₈H₁₉N₅O₆ MW: 401.13 CAS No: NA</p>	Dabigatran	
70	<p>N-Nitroso 1-deoxy-1-(octylamine)-D-glucinol Chemical Name: N-octyl-N-((2S,3R,4R,5R)-2,3,4,5,6-pentahydroxyhexyl)nitrous amide MF: C₁₄H₃₀N₂O₆ MW: 322.40 CAS No. NA</p>	D-glucinol	
71	<p>N-Nitroso Desloratadine Chemical Name: 8-Chloro-6,11-dihydro-11-(1-nitroso-4-piperidinylidene)-5H-benzo[5,6]cyclohepta[1,2-b]pyridine MF: C₁₉H₁₈ClN₃O MW: 339.8 CAS No: 1246819-22-6</p>	Desloratadine	

72	<p>N-nitroso N methyl Urea Chemical Name: 1-Methyl-1-nitrosourea MF: C₂H₅N₃O₂ MW: 103.08 CAS No: 684-93-5</p>	Diazomethane	
73	<p>N Nitroso Diclofenac Chemical Name: 2-[(2,6-Dichlorophenyl)nitrosoamino] Benzene acetic Acid MF: C₁₄H₁₀Cl₂N₂O₃ MW: 325.1 CAS No: 66505-80-4</p>	Diclofenac	
74	<p>N-Nitroso-Dorzolamide Chemical Name: ((4S,6S)-4-(ethyl(nitroso)amino)-6-methyl-5,6-dihydro-4H-thieno[2,3-b]thiopyran-2-sulfonamide 7,7-dioxide) MF: C₁₀H₁₅N₃O₅S₃ MW: 353.4 CAS No: NA</p>	Dorzolamide	
75	<p>N Nitroso Doxylamine Chemical Name: N-methyl-N-(2-(1-phenyl-1-(pyridin-2-yl)ethoxy)ethyl)nitrous amide MF: C₁₅H₁₇N₃O₂ MW: 285.34 CAS No: NA</p>	Doxylamine Succinate	
76	<p>N-Nitroso Diethylene Triamine Chemical Name: N,N-bis(2-aminoethyl)nitrous amide M.F: C₄H₁₂N₄O MW: 132.2 CAS No: 741659-46-1</p>	Diethylene Triamine	
77	<p>Duloxetine Impurity 16 Chemical Name: N-(3-hydroxy-3-(thiophen-2-yl)propyl)-N-methylnitrous amide MF: C₈H₁₂N₂O₂S MW: 200.3 CAS No: 2418708-78-6</p>	Duloxetine	
78	<p>N-Nitroso-Duloxetine Chemical Name: N-methyl-N-(3-(naphthalen-1-yl oxy)-3-(thiophen-2-yl) prolylnitrous amide MF: C₁₈H₁₈N₂O₂S MW: 326.4 CAS No: 2680527-91-5</p>	Duloxetine Intermediate	

79	<p>N-Nitroso Doxepine Chemical Name: (E)-N-(3-(Dibenzo[b,e]oxepin-11(6H)-ylidene)propyl)-N-methylnitrous amide M.F:C18H18N2O2 MW: 294.12 CAS No: NA</p>	Doxepine	
80	<p>N-Nitroso Domperidone Impurity A Chemical Name: 5-chloro-1-(1-nitroso piperidine-4-yl)-1,3-dihydro-2H-benzo[d]imidazole-2-one M.F: C17H13ClN4O2 MW: 280.71 CAS No: NA</p>	Domperidone	
81	<p>N-Nitroso-Donepezil EP Impurity A Chemical Name: 5,6-dimethoxy-2-((1-nitrosopiperidin-4-yl)methyl)-2,3-dihydro-1H-inden-1-one MF: C17H22N2O4 MW: 318.4 CAS No: NA</p>	Donepezil	
82	<p>N-Nitroso Enalapril Chemical Name: (S)-1-((S)-2-(((S)-1-ethoxy-1-oxo-4-phenylbutan-2-yl)(nitroso)amino)propanoyl)pyrrolidine-2-carboxylic acid MF: C20H27N3O6 MW: 405.44 CAS No: NA</p>	Enalapril	
83	<p>N-Nitroso Ethambutol (Monomer) Chemical Name N-((R)-1-Hydroxybutan-2-yl)-N-(2-(((R)-1-hydroxybutan-2-yl)amino)ethyl)nitrous amid MF: C₁₀H₂₃N₃O₃ MW:233.3 CAS No.78213-39-5</p>	Ethambutol	
84	<p>Chemical Name N,N'-(Ethane-1,2-diy)bis(N-((R)-1-hydroxybutan-2-yl)nitrous amide) MF: C₁₀H₂₂N₄O₄ MW:262.3 CAS No. 52322-22-2</p>	Ethambutol	

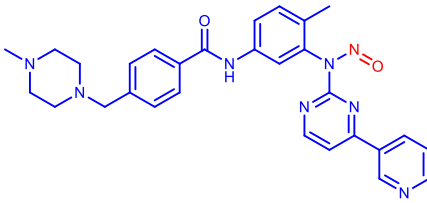
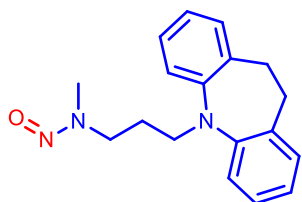
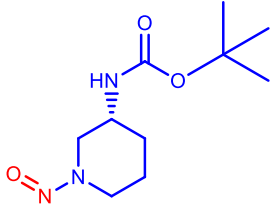
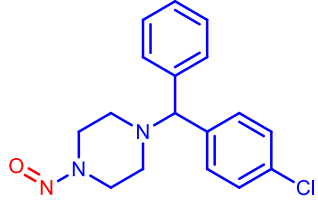
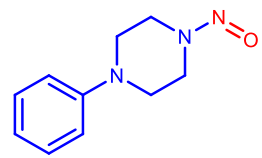
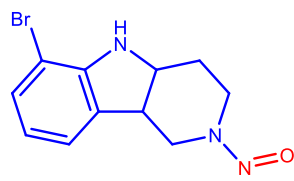
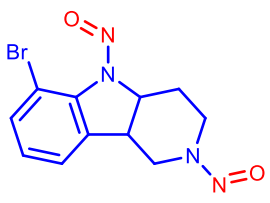
85	Escitalopram Nitroso Impurity Chemical Name: N-(3-(5-Cyano-1-(4-fluorophenyl)-1,3-dihydroisobenzofuran-1-yl)propyl)-N-methylnitrous Amide MF: C ₁₉ H ₁₈ FN ₃ O ₂ MW 339.4 CAS No: NA	Escitalopram	
86	N-Nitroso Azacyclonol Chemical Name: 4-(diphenylmethyl)-1-nitroso piperidine MF: C ₁₈ H ₂₀ N ₂ O MW 280.36 CAS No: NA	Fexofenadine	
87	N-Nitroso Fluoxetine Chemical Name: N-methyl-N-(3-phenyl-3-(4-(trifluoromethyl)phenoxy)propyl)nitrous amide MF: C ₁₇ H ₁₇ F ₃ N ₂ O ₂ MW 338.3 CAS No: 150494-06-7	Fluoxetine	
88	(1-nitrosopiperidin-2-yl)methanamine Chemical Name: (1-nitrosopiperidin-2-yl)methanamine MF: C ₆ H ₁₃ N ₃ O MW 143.19 CAS No: NA	Flecainide KSM	
89	(1-nitrosopiperidin-2-yl)methanol Chemical Name: (1-nitrosopiperidin-2-yl)methanol MF: C ₆ H ₁₂ N ₂ O ₂ MW 144.15 CAS No: NA	Flecainide KSM	
90	N-Nitroso Flecainide Chemical Name: N-((1-nitrosopiperidin-2-yl)methyl)-2,5-bis(2,2,2-trifluoroethoxy)benzamide MF: C ₁₇ H ₁₉ F ₆ N ₃ O ₄ MW: 443.34 CAS No. NA	Flecainide	
91	N-Nitroso Flupirtine INT Chemical Name: N-(6-amino-5-nitropyridin-2-yl)-N-(4-fluorobenzyl)nitrous amide M.F: C ₁₂ H ₁₀ FN ₅ O ₃ MW: 291.24 CAS No: NA	Flupirtine	

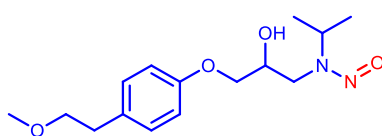
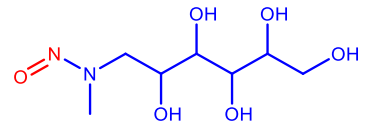
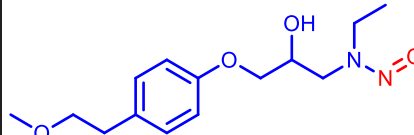
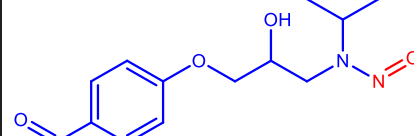
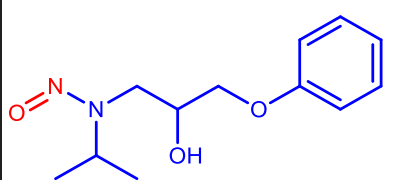
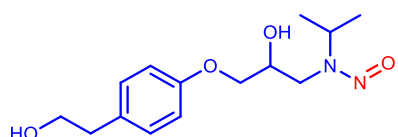
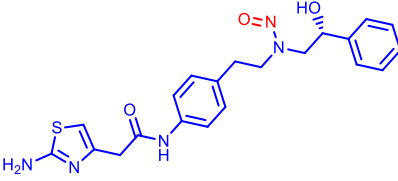


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92	<p>N-Nitroso Flupirtine INT Chemical Name: N-(6-amino-5-nitropyridin-2-yl)-N-(4-fluorobenzyl)nitrous amide M.F:C12H10FN5O3 MW: 291.24 CAS No: NA</p>	Flupirtine	
93	<p>N Nitroso Gabapentine Chemical Name: 2-Nitroso-2-azaspiro[4,5]decan-3-one MF: C9H14N2O2 MW: 182.11 CAS No: NA</p>	Gabapentine	
94	<p>N-Nitroso Guanine Chemical Name: 2-amino-9-nitroso-1H-purin-6(9H)-one MF: C5H4 N6O2 MW: 180.1 CAS No: NA</p>	Guanine	
95	<p>N-Nitroso Hydrochlorothiazide Chemical Name: 6-Chloro-4-nitroso-3,4-dihydro-2H-benzo[e][1,2,4]thiadiazine-7-sulfonamide 1,1-dioxide MF: C7H7ClN4O2S2 MW: 326.74 CAS No: 63779-86-2</p>	Hydro chlorothiazide	
96	<p>N-Nitroso-2,2'-iminodiacetohydrazide Chemical Name: N,N-bis(hydrazinecarbonylmethyl)nitrous amide MF: C4H10N6O3 MW: 190.16 CAS No: 5438-82-4</p>	Hydroxo cobalamin	
97	<p>N-Nitroso 2-methyl indoline Chemical Name: 2,3-Dihydro-2-methyl-1- nitroso-1H-indole MF: C9H10N2O MW: 162.2 CAS No: 85440-79-5</p>	Indapamide	
98	<p>N-Nitroso Icatibant Int. Chemical Name: (R)-2-nitroso-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid MF: C10H10N2O3 MW: 206.07 CAS No: NA</p>	Icatibant Int.	

99	N-Nitroso Imatinib Chemical Name: N-(4-methyl-3- (nitroso(4-(pyridin-3-yl)pyrimidine-2-yl)amino)phenyl)-4-((4- methylpiperzin-1- yl)methyl)benzamide MF: C ₂₉ H ₃₀ N ₈ O ₂ MW: 522.60 CAS No. NA		
100	N-Nitroso Impriramine Chemical Name: 5H-Dibenz[b,f]azepine-5-propanamine, 10,11-dihydro-N-methyl-N-nitroso MF: C ₁₈ H ₂₁ N ₃ O MW: 295.38 CAS No. 57164-17-7	Impriramine	
102	N-Nitroso Linagliptin BOC Intermediate Chemical Name : Tert-butyl((3R)-1- nitroso-piperidin-3-yl)carbamate MF: C ₁₀ H ₁₈ N ₃ O MW: 228.14 CAS No.: NA	Linagliptin	
103	N Nitroso Levocetrizine Impurity A Chemical Name: 1-((4-chlorophenyl)(phenyl)methyl)-4-nitrosopiperazine MF: C ₁₇ H ₁₈ ClN ₃ O MW: 315.80 CAS No. NA	Levocetrizine	
104	1-Nitroso-4-phenylpiperazine Chemical Name: 1-Nitroso-4-phenylpiperazine MF: C ₁₀ H ₁₃ N ₃ O MW: 191.23 CAS No. 14340-33-1	Levodropropizine	
105	6-bromo-2-nitroso-2,3,4,4a,5,9b-hexahydro- 1H-pyrido[4,3-b]indole Chemical Name: 6-bromo-2-nitroso-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole MF: C ₁₁ H ₁₂ BrN ₃ O MW: 282.14 CAS No. NA	Lumateperon Intermediate	
106	6-Bromo-2,5-dinitroso-2,3,4, 4a,5,9b-hexahydro-1H-pyrido[4,3-b]Indole Chemical Name: 6-Bromo-2,5-dinitroso-2,3,4, 4a,5,9b-hexahydro-1H-pyrido[4,3-b]Indole MF: C ₁₁ H ₁₂ BrN ₄ O ₂ MW 311.13 CAS No: NA	Lumateperon Intermediate	

107	N Nitroso Metoprolol Chemical Name: N-(2-Hydroxy-3-(4-(2-methoxyethyl)phenoxy)propyl)-N-isopropyl nitrous amide MF: C ₁₅ H ₂₄ N ₂ O ₄ MW: 296.36 CAS No: 138768-62-4	Metoprolol	
108	N-Nitroso-Meglumine Chemical Name: N-methyl-N-(2,3,4,5,6-pentahydroxyhexyl) nitrous amide MF: C ₇ H ₁₆ N ₂ O ₆ MW: 224.2 CAS No: 62137-31-9	Meglumine	
109	N-Nitroso Metoprolol EP Impurity A Chemical Name: N-ethyl-N-(2-hydroxy-3-(4-(2-methoxyethyl)phenoxy)propyl) nitrous amide MF: C ₁₄ H ₂₂ N ₂ O ₄ MW: 282.3 CAS No. NA	Metoprolol	
110	N-Nitroso Metoprolol EP Impurity C Chemical Name: N-(3-(4-formylphenoxy)-2-hydroxypropyl)-N-isopropyl nitrous amide MF: C ₁₃ H ₁₈ N ₂ O ₄ MW: 266.29 CAS NO: NA	Metoprolol	
112	N-Nitroso Metoprolol EP Impurity F Chemical Name: N-(2-hydroxy-3-phenoxypropyl)-N-isopropyl nitrous amide MF: C ₁₂ H ₁₈ N ₂ O ₃ MW: 238.13 CAS No: NA	Metoprolol	
113	N-Nitroso Metoprolol EP Impurity H Chemical Name: N-(2-hydroxy-3-(4-(2-hydroxyethyl)phenoxy)propyl)-N-isopropyl nitrous amide MF: C ₁₄ H ₂₂ N ₂ O ₄ MW: 282.34 CAS No. NA	Metoprolol	
114	N Nitroso Mirabegron Chemical Name: (R)-2-(2-aminothiazol-4-yl)-N-(4-(2-((2-hydroxy-2-phenylethyl)(nitroso)amino)ethyl)phenyl) acetamide MF: C ₂₁ H ₂₃ N ₅ O ₃ S MW: 425.5 CAS No. NA	Mirabegron	



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115	<p>N-Nitroso Azithioprine Chemical Name: 7-Nitroso-7H-purine-6-thiol MF:C₅H₃N₅OS MW 181.2 CAS No: NA</p>	Mercapto- purine	
116	<p>N-Nitroso Meglumine Chemical Name: N-Methyl-N-((2S,3R,4R,5R)-2,3,4,5,6-pentahydroxyhexyl)nitrous amide M.F: C₇H₁₆N₂O₆ MW: 224.2 CAS No: NA</p>	Meglumine	
117	<p>N Nitroso Mefenamic Acid Chemical Name: N-Nitroso-N-(2,3-dimethylphenyl)-2-aminobenzoic acid MF: C₁₅H₁₄N₂O₃ MW 270.3 CAS No: 2114-63-8</p>	Mefenamic Acid	
118	<p>N-Nitroso-4-piperidone Chemical Name: 1-Nitrosopiperidin-4-one MF:C₅H₈N₂O₂ MW 128.13 CAS No: 55556-91-7</p>		
119	<p>N Nitroso Mirabegron Impurity F Chemical Name N-(2-hydroxy-2-phenylethyl)-N-(4-nitrophenethyl)nitrous amide MF: C₁₆H₁₇N₃O₄ MW: 315.12 CAS No. NA</p>	Mirabegron Impurity F	
120	<p>N Nitroso Moxifloxacin Chemical Name: 1-cyclopropyl-6-fluoro-8-methoxy-7-((4as),7as)-1-nitrosohexahydro-H-pyrrol(3,4-b)pyridine MF: C₂₁H₂₃FN₄O₅ MW: 430.44 CAS No: NA</p>	Moxifloxacin	
121	<p>N-Nitroso Moxifloxacin (R,R) nonane (Mono Nitroso) Chemical Name 6-nitrosooctahydro-1H-Pyrrol(3,4-b)Pyridine MF: C₇H₁₃N₃O MW: 155.11 CAS No. NA</p>	Moxifloxacin	



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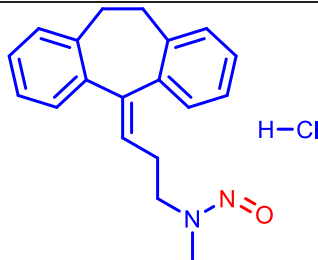
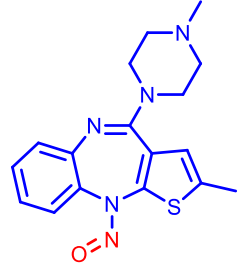
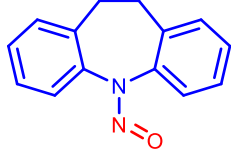
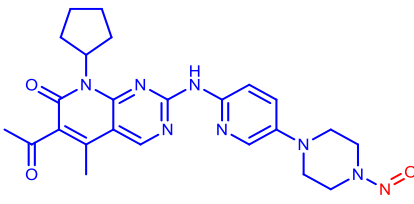
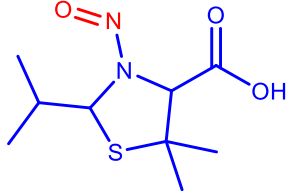
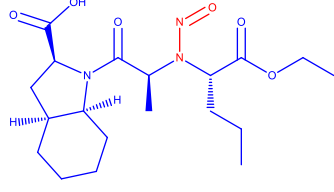
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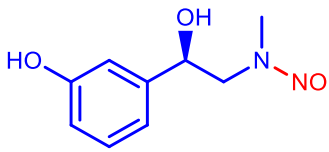
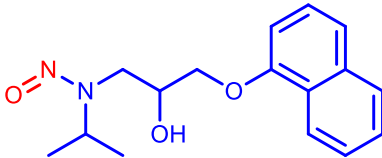
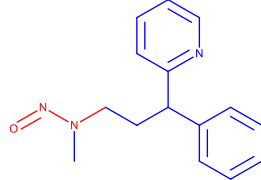
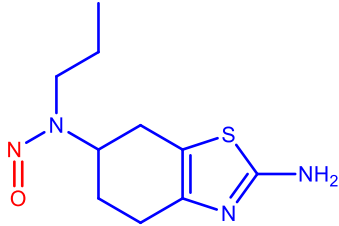
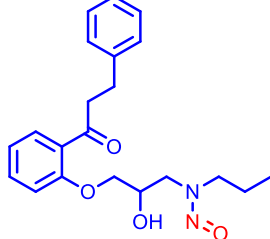
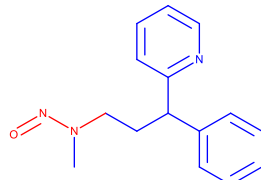
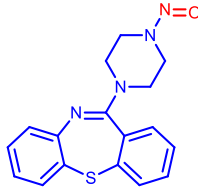
122	<p>N-Nitroso Moxifloxacin (R,R) nonae (DiNitroso) Chemical Name: 1,6-dinitrosooctahydro-1H-pyrrolo[3,4-b]pyridine MF: C₇H₁₂N₄O₂ MW:184.20 CAS No. NA</p>	Moxifloxacin	
123	<p>N Nitroso Desmethyl Mefipristone Chemical name: N-(4-((8S,11R,13S,14S,17S)-17-hydroxy-13-methyl-3-oxo-17-(prop-1-yn-1-yl)-2,3,6,7,8,11,12,13,14,15,16,17-dodecahydro-1H-cyclopenta[a]phenanthren-11-yl)phenyl)-N-methylnitrous amide MF: C₂₈H₃₃NO₂ MW: 415.5 CAS No. NA</p>	Mifepriston	
124	<p>N Nitroso Miglustat Impurity 1 Chemical Name: N-octyl-N-((2S,3R,4R,5R)-2,3,4,5,6-pentahydroxyhexyl)nitrous amide MF: C₁₄H₃₀N₂O₆ MW: 322.4 CAS No. NA</p>	Miglustat	
125	<p>N Nitroso Miglustat Impurity 1 Chemical Name: N-octyl-N-((2S,3R,4R,5R)-2,3,4,5,6-pentahydroxyhexyl)nitrous amide MF: C₁₄H₃₀N₂O₆ MW: 322.4 CAS No. NA</p>	Miglustat	
126	<p>N-nitroso-3-pyrrolidinol Chemical Name 1-nitrosopyrrolidin-3-ol MF: C₄H₈N₂O₂ MW: 116.06 CAS No. : 56222-35-6</p>		
127	<p>N Nitroso Nadolol Chemical Name: N-(Tert-butyl)-N-(3-(((6R,7S)-6,7-dihydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)oxy)-2-hydroxypropyl)nitrous amide MF: C₁₇H₂₆N₂O₅ MW: 338.40 CAS No. NA</p>	Nadolol	
128	<p>N Nitroso Nebivolol Chemical Name: N,N-bis(2-(6-fluorochroman-2-yl)-2-hydroxyethyl)nitrous amide MF: C₂₂H₂₄F₂N₂O₅ MW: 434.4 CAS No: 1391051-68-5</p>	Nebivolol	

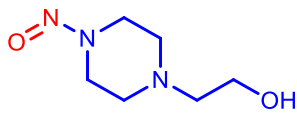
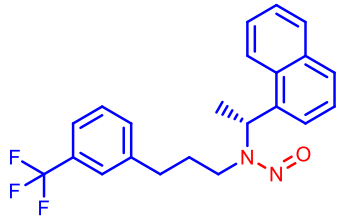
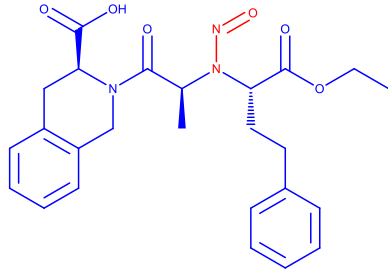
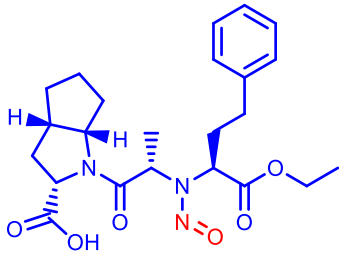
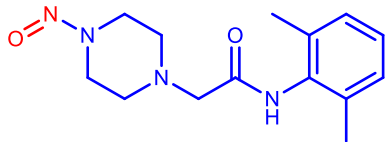
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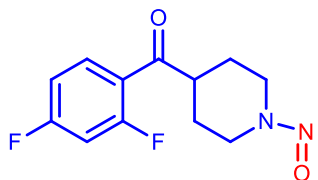
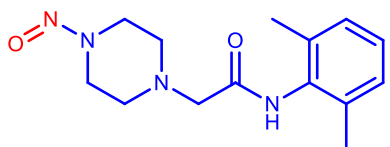
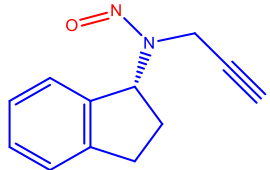
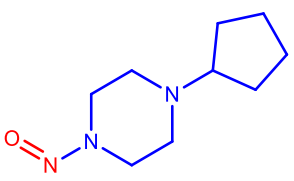
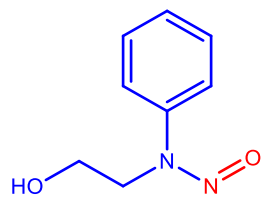
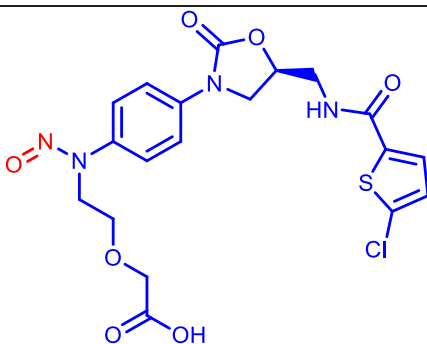
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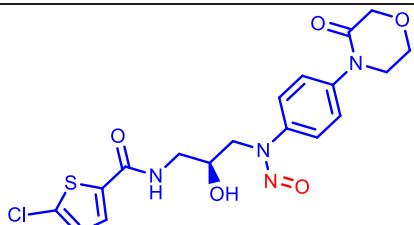
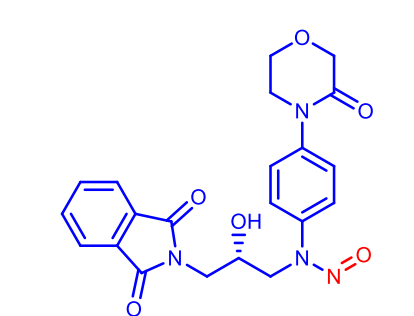
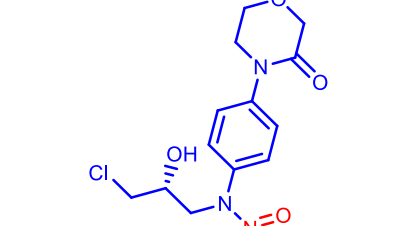
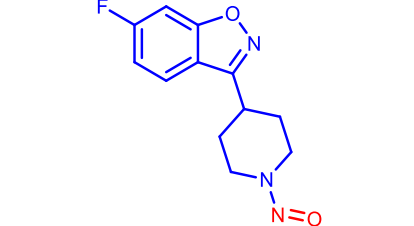
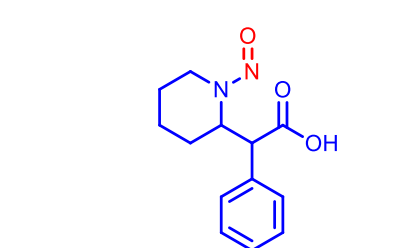
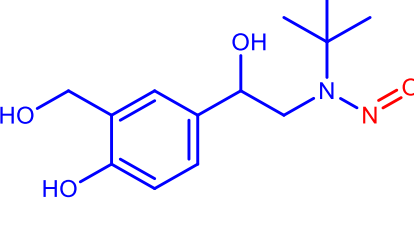
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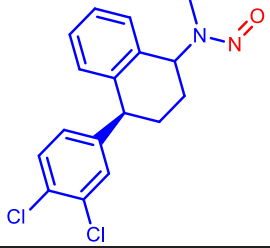
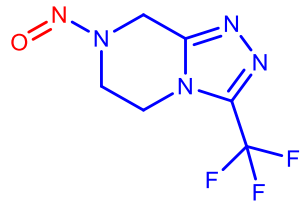
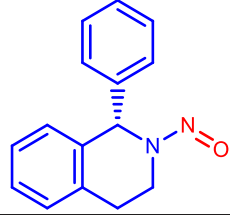
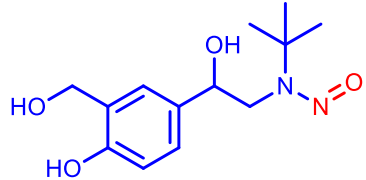
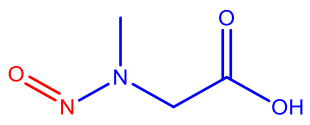
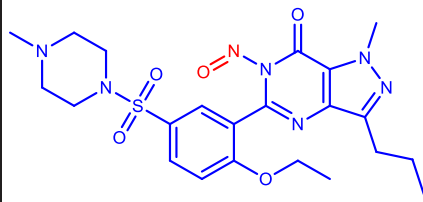
129	<p>N Nitroso Nortriptyline Hydrochloride Chemical Name: N-(3-(10,11-dihydro-5H-dibenzo[a,d][7]annulen-5-ylidene)propyl)-N-methylnitrous amide hydrochloride MF: C₂₀H₂₃ClN₂O MW 342.86 CAS No: 55855-42-0</p>	Nortriptyline Hydrochloride	
130	<p>N Nitroso Olanzapine Chemical Name: 2-methyl-4-(4-methylpiperazin-1-yl)-10-nitroso-10H-benzo[b]thieno[2,3-e][1,4]diazepine MF: C₁₇H₁₉N₅OS MW 402.4 CAS No: NA</p>	Olanzapine	
131	<p>N Nitroso Oxcarbазepine Chemical Name: 5-Nitroso-10,11-dihydro-5H-dibenzo[b,f]azepine MF: C₁₄H₁₂N₂O MW 224.3 CAS No: 7458-08-4</p>	Oxcarbазepine	
132	<p>N-Nitroso Palbociclib Chemical Name: 6-acetyl-8-cyclopentyl-5-methyl-2-((5-(4-nitrosopiperazin-1-yl)pyridin-2-yl)amino)pyrido[2,3-d]pyrimidin-7(8H)-one MF: C₂₄H₂₈N₈O₃ MW:476.54 CAS No. NA</p>	Palbociclib	
133	<p>N-Nitroso-Penicillamine KSM Chemical Name: 5,5-dimethyl-3-nitroso-2-(propan-2-yl)-1,3-thiazolidine-4-carboxylic acid MF: C₉H₁₆N₂O₃S MW: 232.30 CAS No: NA</p>	Penicillamine KSM	
134	<p>N-Nitroso Perindopril Chemical Name: 2S,3aS,7aS)-1-(N-((S)-1-Ethoxy-1-oxopentan-2-yl)-N-nitroso-L-alanyl)octahydro-1H-indole-2-carboxylic acid M.F: C₁₉H₃₁N₃O₆ MW:397.5 CAS No: NA</p>	Perindopril	

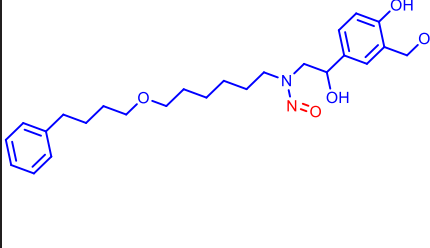
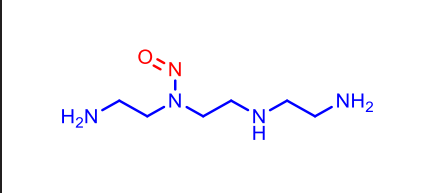
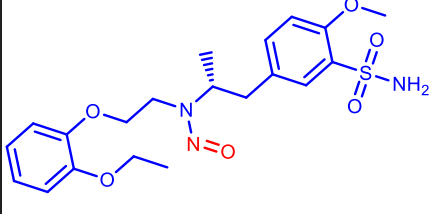
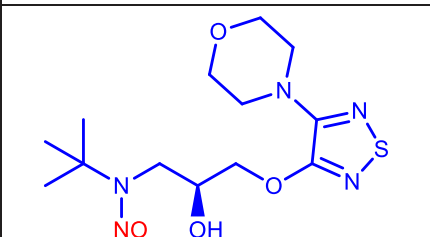
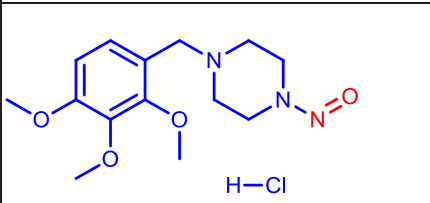
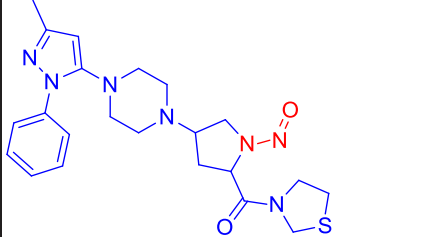
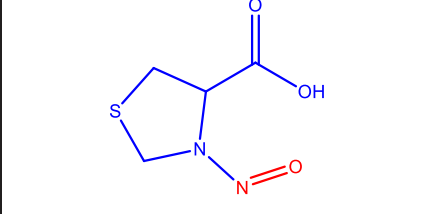
135	N-Nitroso Phenylephrine Chemical Name: N-(2-hydroxy-2-(3-hydroxyphenyl)-N-methyl nitrous amide MF: C ₉ H ₁₂ N ₂ O ₃ MW: 196.21 CAS No: 78658-64-7	Phenylephrine	
136	N-Nitroso Propranolol Chemical Name: N-(2-hydroxy-3-(naphthalen-1-yloxy)propyl)-N-isopropyl nitrous amide MF: C ₁₆ H ₂₀ N ₂ O ₃ MW: 288.3 CAS No: 84418-35-9	Propranolol	
137	N-Nitroso Pheniramine Chemical Name: N-methyl-N(3-phenyl-3-(pyridin-2-yl)propyl) nitrous amide M.F: C ₁₅ H ₁₇ N ₃ O ₄ MW: 255.31 CAS No: NA	Pheniramine	
138	N Nitroso Pramipexole Chemical Name: N-(2-amino-4,5,6,7-tetrahydrobenzo[d]thiazol- 6-yl)-N-propyl nitrous amide MF: C ₁₀ H ₁₆ N ₄ OS MW: 240.33 CAS No: NA	Pramipexole	
139	N-Nitroso Propafenone Chemical Name: N-(2-hydroxy-3-(2-(3-phenylpropanoyl) phenoxy)propyl)-N-propyl nitrous amide MF: C ₂₁ H ₂₆ N ₂ O ₄ MW: 370.4 CAS No: NA	Propafenone	
140	N-Nitroso Pheniramine Chemical Name: N-methyl-N(3-phenyl-3-(pyridin-2-yl)propyl) nitrous amide M.F: C ₁₅ H ₁₇ N ₃ O ₄ MW: 255.31 CAS No: NA	Pheniramine	
141	N-Nitroso Quetapine Impurity B Chemical Name: 11-(4-nitrosopiperazin-1-yl)dibenzo[b,f][1,4]thiazepine MF: C ₁₇ H ₁₆ N ₄ OS MW: 324.40 CAS No: NA	Quetiapine Intermediate	

142	<p>Nitroso 1(2-hydroxy ethyl)piperazine Chemical Name: 2-(4-nitroso-piperazin-1-yl)-ethanol MF: C₆H₁₃N₃O₂ MW: 159.19 CAS No. 48121-20-6</p>	Quetapine	
143	<p>N-Nitroso Quinapril EP Impurity A Chemical Name: (R)-N-(1-(naphthalen-1-yl)ethyl)-N-(3-(3-(trifluoromethyl)phenyl)propyl)nitrous amide MF: C₂₂H₂₁F₃N₂O MW: 386.41 CAS No: NA</p>	Quinapril	
144	<p>N-Nitroso Quinapril Chemical Name:(S)-2-(N-((S)-1-ethoxy-1-oxo-4-phenylbutan-2-yl)-N-nitroso-L-alanyl)-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid MF: C₂₅H₂₉N₃O₆ MW: 467.5 CAS No: NA</p>	Quinapril	
145	<p>N Nitroso Ramipril Chemical Name: (2S,3aS,6aS)-1-(N-((S)-1-ethoxy-1-oxo-4-phenylbutan-2-yl)-N-nitroso-L-alanyl)octahydrocyclopenta[b]pyrrole-2-carboxylic acid MF: C₂₃H₃₁N₃O₆ MW: 445.51 CAS No: NA</p>	Ramipril	
146	<p>N-Nitroso Ranolazine Chemical Name: N-(2,6-dimethylphenyl)-2-(4-nitrosopiperazin-1-yl)acetamide MF: C₁₄H₂₀N₄O₂ MW: 276.16 CAS No: NA</p>	Ranolazine Intermediate	

147	N-Nitroso Resperidone Difluorobenzoyl Impurity Chemical Name: (2,4-difluorophenyl)(1-nitrosopiperidin-4-yl)methanone M.F: C ₁₂ H ₁₂ F ₂ N ₂ O ₂ MW: 254.23 CAS No: NA	Resperidone	
148	N-Nitroso ranolazine related compound C Chemical Name: N-(2,6-dimethylphenyl)-2-(4-nitrosopiperazin-1-yl)acetamide MF: C ₁₄ H ₂₀ N ₄ O ₂ MW: 276.16 CAS No: NA	Ranolazine Intermediate	
149	N Nitroso Rasagiline Chemical Name: (R)-N-(2,3-Dihydro-1H-inden-1-yl)-N-(prop-2-yn-1-yl)nitrous amide MF: C ₁₂ H ₁₂ N ₂ O MW: 200.2 CAS No: 2470278-90-9	Rasagiline	
150	N-Nitroso cyclopentylpiperazine Chemical Name: 1-Cyclopentyl-4-nitrosopiperazine MF: C ₉ H ₁₇ N ₃ O MW: 183.26 CAS No: 61379-66-6	Rifapentine	
151	Rivaroxaban Nitroso Impurity 1 Chemical Name: N-(2-hydroxyethyl)-N-phenylnitrous amide MF: C ₈ H ₁₀ N ₂ O ₂ MW: 166.2 CAS No: 25413-76-7	Rivaroxaban Intermediate	
152	N Nitroso Rivaroxaban Open Ring Acid Impurity Chemical Name: (S)-2-(2-((4-(5-((5-chlorothiophene-2-carboxamido)methyl)-2-oxooxazolidin-3-yl)phenyl)(nitroso)amino)ethoxy)acetic acid MF: C ₁₉ H ₁₉ ClN ₄ O ₇ S MW: 482.9 CAS No. NA	Rivaroxaban	

153	N Nitroso Rivaroxaban Impurity G Chemical Name: (S)-5-chloro-N-(2-hydroxy-3-(nitroso(4-(3-oxomorpholino)phenyl)amino)propyl)thiophene-2-carboxamide MF: C ₁₈ H ₁₉ ClN ₄ O ₅ S MW: 438.89 CAS No. NA	Rivaroxaban	
154	Rivaroxaban Nitroso Impurity Chemical Name: (S)-N-(3-(1,3-dioxisoindolin-2-yl)-2-hydroxypropyl)-N-(4-(3-oxomorpholino)phenyl)nitrous amide MF: C ₂₁ H ₂₀ N ₄ O ₆ MW: 424.41 CAS No. NA	Rivaroxaban Intermediate	
155	Rivaroxaban Nitroso Impurity 3 Chemical Name: (R)-N-(3-chloro-2-hydroxypropyl)-N-(4-(3-oxomorpholino)phenyl)nitrous amide MF: C ₁₃ H ₁₆ ClN ₃ O ₄ MW: 313.74 CAS No: NA	Rivaroxaban Intermediate	
156	6-Fluro-3(1-nitroso piperidin-4-yl)benzo(d)isoxazole Chemical Name: 6-Fluro-3(1-nitroso piperidin-4-yl)benzo(d)isoxazole MF: C ₁₂ H ₁₂ FN ₃ O ₂ MW: 249.24 CAS No: NA	Risperidone	
157	N-Nitroso Ritanilic Acid Chemical Name: 2-(1-nitrosopiperidin-2-yl)-2-phenylacetic acid MF: C ₁₃ H ₁₆ N ₂ O ₃ MW: 248.28 CAS No. NA	Ritanilic Acid	
158	N-Nitroso Salbutamol Chemical Name: (9E)-Erythromycin N-(tert-butyl)-N-(2-hydroxy-2-(4-hydroxy-3-(hydroxymethyl)phenyl)ethyl)nitrous amide MF: C ₁₃ H ₂₀ N ₂ O ₄ MW: 268.31 CAS No: NA	Salbutamol	

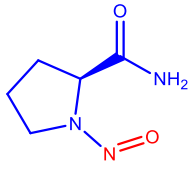
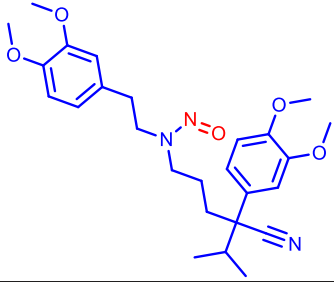
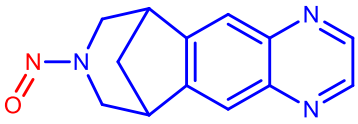
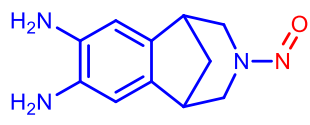
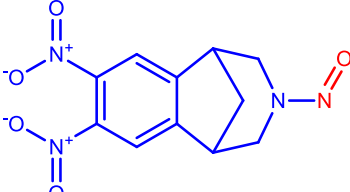
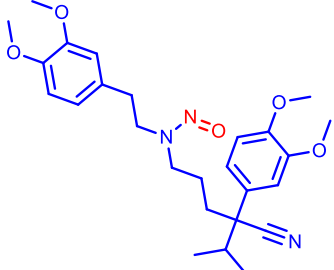
159	N Nitroso Sertraline Chemical Name: N-((4S)-4-(3,4-Dichlorophenyl)-1,2,3,4-tetrahydronaphthalen-1-yl)-N-methylnitrous amide MF: C ₁₃ H ₂₀ N ₂ O ₄ MW: 334.23 CAS No: NA	Sertraline	
160	N Nitroso Sitagliptin Chemical Name: 7-nitroso-3-(trifluoromethyl)-5,6,7,8-tetrahydro- [1,2,4]triazolo[4,3-a]pyrazine MF: C ₆ H ₆ F ₃ N ₅ O MW: 221.05 CAS No: NA	Sitagliptin Intermediate	
161	N Nitroso Solifenacin Chemical Name: N-Nitroso (s)-1-phenyl 1,2,3,4,tetrahydro isoquinoline MF: C ₁₅ H ₁₄ N ₂ O MW: 238.28 CAS No: NA	Solifenacin Intermediate	
162	N Nitroso Salmeterol INT Chemical Name: N-(Tert-butyl)-N-(2-hydroxy-2-(4-hydroxy-3-(hydroxymethyl)phenyl)ethyl)nitrous amide MF: C ₁₃ H ₂₀ N ₂ O ₄ MW: 268.3 CAS No. NA	Salmeterol	
163	N-Nitrososarcosine Chemical Name: (1-nitrosopiperidin-2-yl)methanol MF: C ₃ H ₆ N ₂ O ₃ MW: 118.04 CAS No. NA	Sarcosine	
164	N-Nitroso sildenafil Chemical Name: 5-(2-Ethoxy-5-((4-methylpiperazin-1-yl)sulfonyl)phenyl)-1-methyl-6-nitroso-3-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one MF: C ₂₂ H ₂₉ N ₇ O ₅ S MW: 503.6 CAS No. NA	Sildenafil	

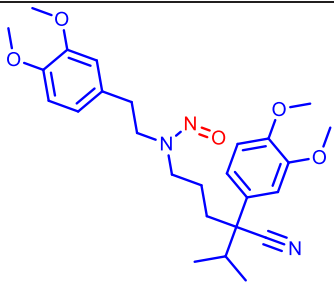
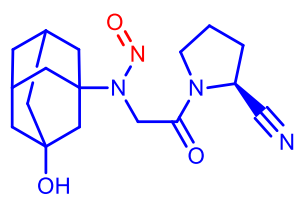
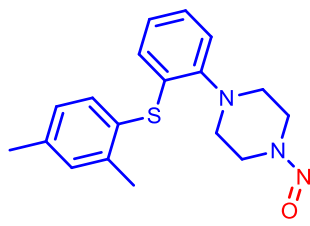
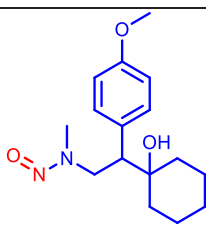
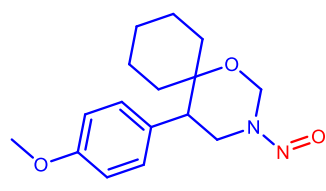
165	N-Nitroso Salmeterol Chemical Name: N-(2-Hydroxy-2-(4-hydroxy-3-(hydroxymethyl)phenyl)ethyl)-N-(6-(4-phenylbutoxy)hexyl)nitrous amide M.F: C ₂₅ H ₃₆ N ₂ O ₅ M.W: 444.56 CAS NO: NA	Salmeterol	
166	N-Nitroso Trientine Chemical Name: N-(2-aminoethyl)-N-(2-((2-aminoethyl)amino)ethyl)nitrosamide MF: C ₆ H ₁₇ N ₅ O MW: 175.23 CAS No: NA	Trientine	
167	N Nitroso Tamsulosin Chemical Name: (R)-5-(2-((2-ethoxyphenoxy)ethyl)(nitroso)amino)propyl)-2-methoxybenzenesulfonamide MF: C ₂₀ H ₂₇ N ₃ O ₆ S MW: 437.5 CAS No: NA	Tamsulosin	
168	N Nitroso Timolol Chemical Name: (S)-N-(tert-butyl)-N-(2-hydroxy-3-((4-morpholino-1,2,5-thiadiazol-3-yl)oxy)propyl)nitrous amide MF: C ₁₃ H ₂₃ N ₅ O ₄ S MW: 345.42 CAS No. NA	Timolol	
169	N-Nitrosamine Trimetazidine Chemical Name: 1-Nitroso-4-(2,3,4-trimethoxybenzyl)piperazine hydrochloride MF: C ₁₄ H ₂₁ N ₃ O ₄ : HCl MW 295.3: 36.5 CAS No: 92432-50-3	Trimetazidine Dihydrochloride	
170	N-Nitroso Teneigliptin Chemical Name: (4-(4-(3-Methyl-1-phenyl-1H-pyrazol-5-yl)piperazin-1-yl)-1-nitrosopyrrolidin-2-yl)(thiazolidin-3-yl)methanone MF: C ₂₂ H ₂₉ N ₇ O ₂ S MW: 455.21 CAS No. NA	Teneigliptin	
171	N-Nitroso Thioproline Chemical Name: 3-nitrosothiazolidine-4-carboxylic acid M.F: C ₁₂ H ₁₀ N ₂ O ₃ MW: 291.24 CAS No: 88381-44-6	Thioproline	

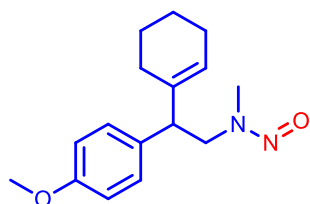
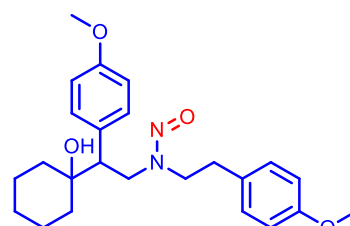
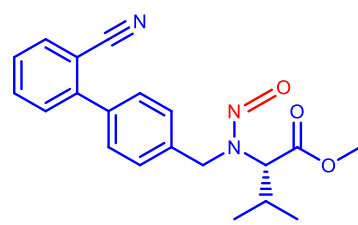
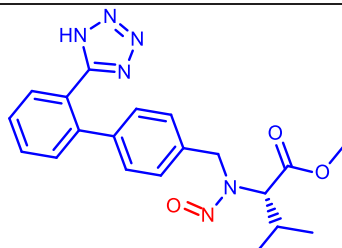
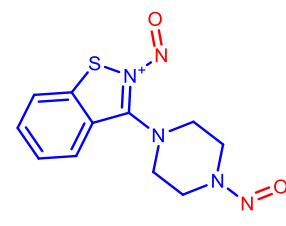
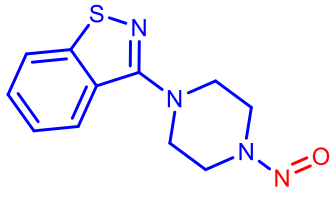
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172	N-Nitroso Prolinamide Chemical Name: Name (S)-1-Nitrosopyrrolidine-2-Carboxamide MF: C ₅ H ₉ N ₃ O ₂ MW: 143.1 CAS NO: 79108-51-3	Vildagliptin Intermediate	
173	N-Nitroso Verapamil Chemical Name: N-(4-Cyano-4-(3,4-dimethoxyphenyl)-5-methylhexyl)-N-(3,4-dimethoxyphenethyl)nitrous amide MF: C ₂₆ H ₃₅ N ₃ O ₅ MW: 469.57 CAS No. NA	Verapamil	
174	Varneciline Impurity 9 Chemical Name: 8-nitroso-7,8,9,10-tetrahydro-6H-6,10-methanoazepino[4,5-g]quinoxaline MF: C ₁₃ H ₁₂ N ₄ O MW: 240.26 CAS No: 2755871-02-2	Varneciline	
175	Varneciline Impurity 17 Chemical Name: [3-Nitroso-2,3,4,5-tetrahydro-1H-1,5-methanobenzo[d]azepine-7,8-diamine] MF: C ₁₁ H ₁₄ N ₄ O MW: 218.6 CAS No: 2803960-64-5	Varneciline	
176	Varneciline Impurity 10 (Dinitroso) Chemical Name: 4,5-Dinitro-10-nitroso-10-azatricyclo[6.3.1.0(2,7)]dodeca-2,4,6-triene MF: C ₁₁ H ₁₀ N ₄ O ₅ MW: 278.07 CAS No: NA	Varneciline	
177	N-Nitroso Verapamil Chemical Name: N-(4-Cyano-4-(3,4-dimethoxyphenyl)-5-methylhexyl)-N-(3,4-dimethoxyphenethyl)nitrous amide MF: C ₂₆ H ₃₅ N ₃ O ₅ MW: 469.57 CAS No. NA	Verapamil	

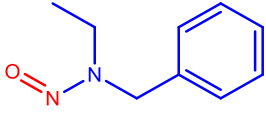
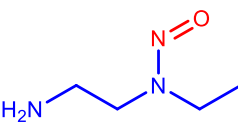
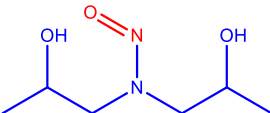
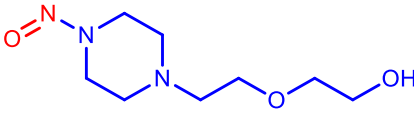
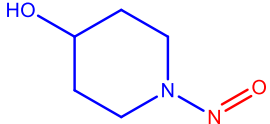
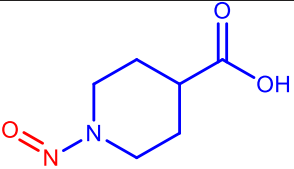
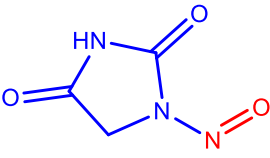
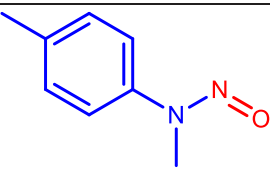
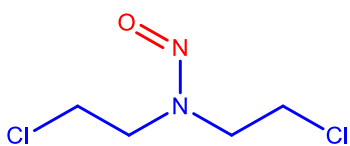
178	<p>N-Nitroso Verapamil Chemical Name: N-(4-Cyano-4-(3,4-dimethoxyphenyl)-5-methylhexyl)-N-(3,4-dimethoxyphenethyl)nitrous amide MF: C₂₆H₃₅N₃O₅ MW: 469.57 CAS No. NA</p>	Verapamil	
179	<p>Nitroso Vildagliptin Impurity 1 Chemical Name: N-(2-((S)-2-cyanopyrrolidin-1-yl)-2-oxoethyl)-N-(3-hydroxyadamantan-1-yl)nitrous amide MF: C₁₇H₂₄N₄O₃ MW: 332.40 CAS No: NA</p>	Vildagliptin	
180	<p>1-(2-((2,4-dimethylphenyl) thio) phenyl)-4-nitrosopiperazine Chemical Name: 1-(2-((2,4-dimethylphenyl) thio) phenyl)-4-nitrosopiperazine MF: C₁₈H₂₁N₃O S MW: 327.44 CAS No: NA</p>	Vortoxitine	
181	<p>N-Nitroso Venlafaxine Impurity Chemical Name: (RS)-N-(2-(1-hydroxycyclohexyl)-2-(4-methoxyphenyl)ethyl)-N-methylnitrous amide MF: C₁₆H₂₄N₂O₃ MW:292.18 CAS No. NA</p>	Venlafaxine	
182	<p>N-Nitroso Venlafaxine Impurity E Chemical Name: 5-(4-Methoxyphenyl)-3-Nitroso-1-oxa-3-azaspiro[5.5]undecane MF: C₁₆H₂₂N₂O₃ MW:290.36 CAS No. NA</p>	Venlafaxine Impurity E	

183	N-Nitroso Venlafaxine Impurity F Chemical Name: 5-(4-Methoxyphenyl)-3-Nitroso-1-oxa-3-azaspiro[5.5]undecane MF: C ₁₆ H ₂₂ N ₂ O ₂ MW: 274.36 CAS No. NA	Venlafaxine Impurity F	
184	N-Nitroso Venlafaxine Impurity H Chemical Name: N-(2-(1-hydroxycyclohexyl)-2-(4-methoxyphenyl)ethyl)-N-(4-methoxyphenethyl)nitrous amide MF: C ₂₄ H ₃₂ N ₂ O ₄ MW: 412.52 CAS No. NA	Venlafaxine Impurity H	
185	Nitroso N(2-cyno(1,1 biphenyl)4-yl)methyl-L-valine methyl ester Chemical Name: (S)-methyl 2-(((2'-cyano-[1,1'-biphenyl]-4-yl)methyl)(nitroso)amino)-3-methylbutanoate MF: C ₂₀ H ₂₁ N ₃ O ₃ MW: 351.40 CAS No. NA	Valsartan	
186	Nitroso valsartan desvaleryl methyl ester Chemical Name: (S)-methyl 2-(((2'-(1H-tetrazol-5-yl)-[1,1'-biphenyl]yl)methyl)(nitroso)amino)-3-methylbutanoate MF: C ₂₀ H ₂₂ N ₆ O ₃ MW: 394.43 CAS No. NA	Valsartan	
187	N-Nitroso Ziprasidone Chemical Name: 2-nitroso-3-(4-nitrosopiperazin-1-yl)benzo[d]isothiazol-2-ium MF: C ₁₁ H ₁₂ N ₅ O ₂ S MW: 278.31 CAS No: NA	Ziprasidone	
188	N-Nitroso Ziprasidone Chemical Name: 3-(4-nitroso piperazine-1-yl) benzo [d] isothiazole MF: C ₁₁ H ₁₂ N ₄ OS MW: 248.30 CAS No. 14340-33-1	Ziprasidone	



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189	N-Nitroso-N-Ethyl-Benzylamine Chemical Name: N-Ethyl-N-nitrosobenzylamine MF: C ₉ H ₁₂ N ₂ O MW: 164.20 CAS No. 20689-96-7	
190	N-Nitroso Ethyl ethylenediamine Chemical Name: N-(2-aminoethyl)-N-ethylnitrous amide MF: C ₄ H ₁₁ N ₃ O MW: 117.15 CAS No. NA	
191	N-Nitroso Diisopropanol Amine Chemical Name: 1,1'-(Nitrosoimino)bis-2-propanol MF: C ₆ H ₁₄ N ₂ O ₃ MW: 162.19 CAS No. 53609-64-6	
192	2-(2-(4-nitrosopiperazin-1-yl)ethoxy)ethanol Chemical Name: 2-(2-(4-nitrosopiperazin-1-yl)ethoxy)ethanol MF: C ₈ H ₁₇ N ₃ O ₃ MW: 203.24 CAS No. NA	
193	N-Nitroso 4-hydroxy piperidine Chemical Name: N-Nitroso-4-piperidinol MF: C ₅ H ₁₀ N ₂ O ₂ MW: 130.1 CAS No. 5556-93-9	
194	N-Nitroso Isonipecotic acid Chemical Name: 4-Carboxy-1-Nitrosopiperdine MF: C ₆ H ₁₀ N ₂ O ₃ MW: 158.18 CAS No. 6238-69-3	
195	N-Nitroso Hydantoin Chemical Name: 1-nitrosoimidazolidine-2,4-dione MF: C ₃ H ₃ N ₃ O ₃ MW: 129.07 CAS No. 42579-28-2	
196	N-Methyl-N-(p-tolyl)nitrous amide Chemical Name: N-Methyl-N-(p-tolyl)nitrous amide MF: C ₈ H ₁₀ N ₂ O MW: 150.02 CAS No. 937-24-6	
197	N-Nitroso Bis (2-chloroethyl) amine Chemical Name: N,N-bis(2-chloroethyl)nitrous amide MF: C ₄ H ₈ Cl ₂ N ₂ O MW: 171.03 CAS No. 67856-68-2	

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198	<p>N-Nitroso-4-methyl amino 3-nitrobenzoic acid Chemical Name: 4-(methyl(nitroso)amino)-3-nitrobenzoic acid MF: C₈H₇N₃O₅ MW: 225.16 CAS No: NA</p>	
199	<p>N-Cylohexyl-N-Methyl nitrous amide Chemical Name: N-Nitroso methylcyclohexylamine MF: C₇H₁₄N₂O MW: 142.20 CAS No: 5432-28-0</p>	
200	<p>N'-Nitro-N-nitroso-N-methylguanidine Chemical Name: 1-Methyl-3-nitro-1-nitrosoguanidine MF: C₂H₅N₅O₃ MW: 147.90 CAS No. 70-25-7</p>	
201	<p>2-Methyl-4-nitro-1-nitroso-1H-Imidazole Chemical Name: 2-Methyl-4-nitro-1-nitroso-1H-Imidazole MF: C₄H₄N₄O₃ MW: 156.10 CAS No. NA</p>	
202	<p>N-Nitroso-N-Ethyl piperazine Chemical Name: 1-Ethyl-4-nitrosopiperazine MF: C₆H₁₃N₃O MW: 143.19 CAS No. 65504-33-8</p>	
203	<p>N-Nitroso-4-piperidinol Chemical Name: N-nitroso-4-hydroxypiperidine MF: C₅H₁₀N₂O₂ MW: 130.15 CAS No. 55556-93-9</p>	
204	<p>N-Nitroso methyl octylamine Chemical Name: N-Methyl-N-nitrosooctylamine MF: C₉H₂₀N₂O MW: 172.31 CAS No. 34423-54-6</p>	
205	<p>N Nitroso Benzylethanolamine Chemical Name: N-benzyl-N-(2-hydroxyethyl)nitrous amide MF: C₉H₁₂N₂O₂ MW: 180.20 CAS No. NA</p>	

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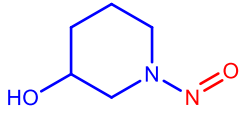
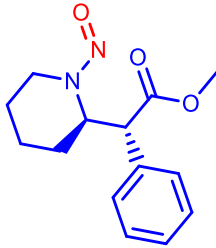
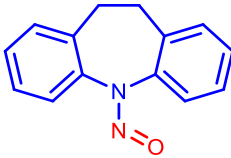
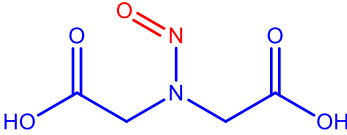
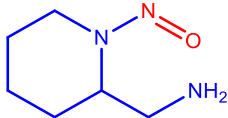
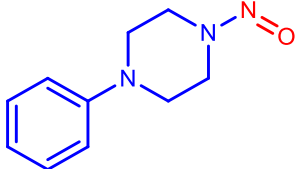
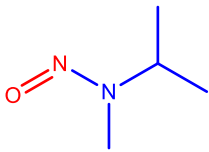
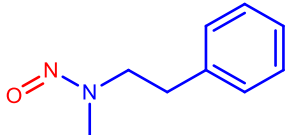
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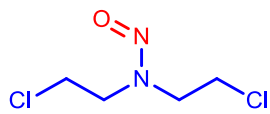
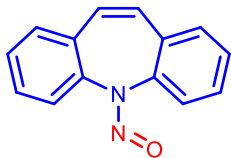
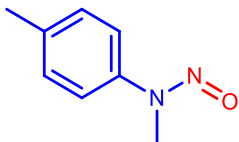
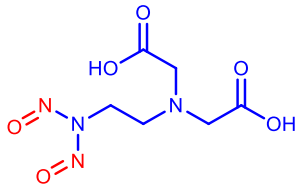
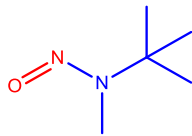
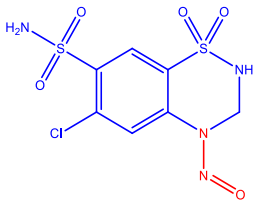
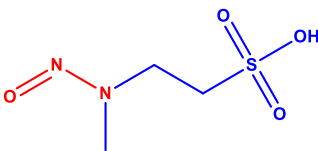
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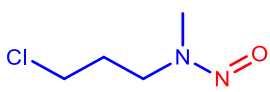
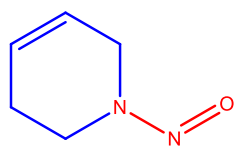
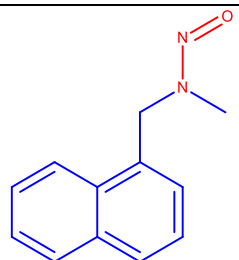
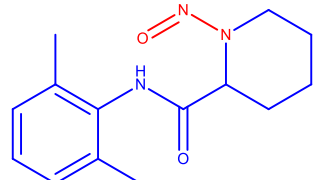
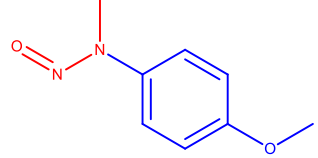
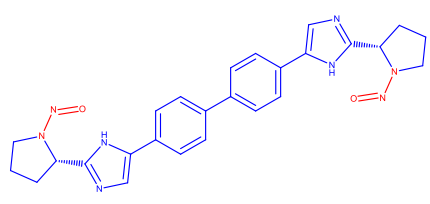
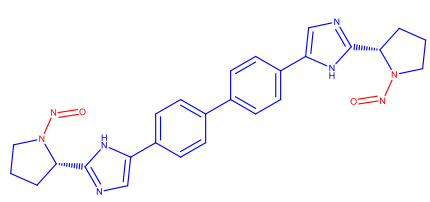
206	N-Nitroso-3-Hydroxypiperidine Chemical Name: N-Nitroso-3-Hydroxypiperidine MF: C ₅ H ₁₀ N ₂ O ₂ MW: 130.15 CAS No. 55556-85-9		
207	N-Nitroso Methylphenidate Chemical Name: N-Nitroso Methylphenidate MF: C ₁₄ H ₁₈ N ₂ O ₃ MW: 262.3 CAS No. 55557-03-4		
208	N Nitroso Imidodibenzyl Chemical Name: 5-Nitroso-10,11-dihydro-5H-dibenzo[b,f]azepine MF: C ₁₄ H ₁₂ N ₂ O MW: 224.3 CAS No. 7458-08-4		
209	N-nitroso Iminodiacetic acid Chemical Name: 2,2'-(Nitrosoimino)bisacetic acid MF: C ₄ H ₆ N ₂ O ₅ MW: 162.1 CAS No. 25081-31-6		
210	N- Nitroso 2-(aminomethyl) piperidine Chemical Name: (L-Nitroso Piperidine-2-yl) methamine MF: C ₆ H ₁₃ N ₃ O MW: 143.19 CAS No. 25081-31-6		
211	1-Nitroso-4-phenylpiperazine Chemical Name: 1-Nitroso-4-phenylpiperazine MF: C ₁₀ H ₁₃ N ₃ O MW: 191.23 CAS No. 14340-3-1		
212	N-Isopropylmethyl Nitrosoamine Chemical Name: N-Methyl-N-nitroso-2-propanamine MF: C ₄ H ₁₀ N ₂ O MW: 102.1 CAS No. 30533-08-5		
213	N-methyl-2phenyl ethyl amine Chemical Name: N Nitroso N-methyl-2phenyl ethyl amine MF: C ₉ H ₁₂ N ₂ O MW: 164.20 CAS No: 13256-11-6		



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214	<p>N Nitroso Bis(2-chloroethyl)amine Chemical Name: N,N-bis(2-chloroethyl)nitrous amide MF: C₄H₈Cl₂N₂O MW:171.03 CAS No. 67856-68-2</p>		
215	<p>N-nitroso Iminostilbene Chemical Name: 5-nitroso-5H-dibenzo[b,f]azepine MF: C₁₄H₁₀N₂O MW:222.24 CAS No. 38652-29-8</p>		
216	<p>N-Methyl-N-(p-tolyl)nitrous amide Chemical Name: N-Methyl-N-(p-tolyl)nitrous amide MF: C₈H₁₀N₂O MW: 150.2 CAS No. 937-24-6</p>		
217	<p>N-N -Dinitroso Ethylene diamine N,N-diacetic acid Chemical Name- N-N -Dinitroso Ethylene diamine N,N-diacetic acid M.F: C₆H₁₀N₄O₆ M.W:234.06 CAS No.: NA</p>	Ethylene diamine N,N-diacetic acid	
218	<p>N-Nitroso Tertiary butyl methyl amine Chemical Name: N-Nitroso-methyl-tertbutyl-amine MF: C₅H₁₂N₂O MW: 116.16 CAS No :2504-18-9</p>	Tertiary butyl methyl amine	
219	<p>4-Nitroso Hydrochlorothiazide Chemical Name: 6-Chloro-4-nitroso-3,4-dihydro-2H-benzo[e][1,2,4]thiadiazine-7-sulfonamide 1,1-dioxide M.F: C₇H₇ClN₄O₅S₂ MW: 326.7 CAS No: 63779-86-2</p>	Hydro-chlorothiazide	
220	<p>N-Nitroso N-methyl taurine Chemical Name: 2-(methyl(nitroso)amino)ethanesulfonic acid M.F: C₃H₈N₂O₄S MW: 168.02 CAS No: NA</p>	N-methyl taurine	

221	<p>3-Chloro-N-Nitroso-N-methyl propylamine Chemical Name : N-(3-chloropropyl)-N-methylnitrous amide MF: C₄H₉ClN₂O MW: 136.04 CAS No.: NA</p>	3-Chloro-N-Methyl-Propylamine	
222	<p>1-Nitroso-1,2,3,6-tetrahydropyridine Chemical Name: 1-Nitroso-1,2,3,6-tetrahydropyridine M.F: C₅H₈N₂O MW: 112.1 CAS No: 55556-92-8</p>		
223	<p>Nitroso of Terbinafine EP impurity A Chemical Name: N-methyl-N-(naphthalen-1-ylmethyl)nitrous amide M.F: C₁₂H₁₂N₂O MW: 200.24 CAS No: 296760-88-8</p>	Terbinafine	
224	<p>N-Nitroso Bupivacaine EP Impurity B Chemical Name: N-(2,6-dimethylphenyl)-1-nitrosopiperidine-2-carboxamide M.F: C₁₄H₁₉N₃O₂ MW: 261.32 CAS No: NA</p>	Bupivacaine	
225	<p>N-Nitroso 4-methoxy N-Methyl aniline Chemical Name: N-Nitroso 4-methoxy N-Methyl aniline M.F: C₈H₁₀N₂O₂ MW: 166.18 CAS No: NA</p>		
226	<p>N-Nitroso Daclastavir INT Chemical Name: 4,4'-bis(2-((S)-1-nitrosopyrrolidin-2-yl)-1H-imidazol-5-yl)-1,1'-biphenyl M.F: C₂₆H₂₆N₈O₂ MW: 482.54 CAS No: NA</p>	Daclastavir	
227	<p>N-Nitroso Daclastavir INT Chemical Name: 4,4'-bis(2-((S)-1-nitrosopyrrolidin-2-yl)-1H-imidazol-5-yl)-1,1'-biphenyl M.F: C₂₆H₂₆N₈O₂ MW: 482.54 CAS No: NA</p>	Daclastavir	



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228	<p>N-Nitroso Respiridone EP Impurity M Chemical Name: 6-fluoro-3-(1-nitrosopiperidin-4-yl)benzo[d]isoxazole M.F: C₁₂H₁₂FN₃O₂ MW: 249.24 CAS No: NA</p>	Respiridone	
229	<p>N-Nitroso Ranitidine EP Impurity K Chemical Name: (E)-N-methyl-N-(1-(methylthio)-2-nitrovinyl)nitrous amide M.F: C₄H₇N₃O₃S MW: 177.18 CAS No: NA</p>	Ranitidine	
230	<p>N-Nitroso Enalapril EP Impurity B Chemical Name: 2-((1-ethoxy-1-oxo-4-phenylbutan-2-yl)(nitrosoamino)propanoic acid M.F: C₁₅H₂₀N₂O₅ MW: 308.33 CAS No: NA</p>	Enalapril	
231	<p>N-Nitroso Chlorophenaramine EP Impurity C Chemical Name: N-(3-(4-chlorophenyl)-3-(pyridin-2-yl)propyl)-N-methylnitrous amide M.F: C₁₅H₁₆ClN₃O MW: 289.76 CAS No: NA</p>	Chlorophenaramine	
232	<p>N-Nitroso Gadoteridol Chemical Name: 2,2',2''-(10-nitroso-1,4,7,10-tetraazacyclododecane-1,4,7-triyl)triacetic acid M.F: C₁₄H₂₅N₅O₇ MW: 375.4 CAS No: 2892260-33-0</p>	Gadoteridol	
233	<p>N-Nitroso Duloxetine Ep Impurity B Chemical Name: (S)-N-(3-hydroxy-3-(thiophen-2-yl)propyl)-N-methylnitrous amide M.F: C₈H₁₂N₂O₂S MW: 200.26 CAS No: NA</p>	Duloxetine	



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234	<p>N-Nitroso Imiquimod Chemical Name: 4-(methyl(nitroso)amino)-3-nitrobenzoic acid M.F: C₈H₇N₃O₅ MW: 225.16 CAS No: NA</p>	Imiquimod	
235	<p>N-Nitroso Norfloxacin Chemical Name: 1-ethyl-6-fluoro-7-(4-nitrosopiperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid M.F: C₁₆H₁₇FN₄O₄ MW: 348.33 CAS No: NA</p>	Norfloxacin	
236	<p>N-Nitroso Mirtazepine INT Chemical Name: 4-Methyl-1-Nitroso-2-phenylpiperazine M.F: C₁₁H₁₅N₃O MW: 205.26 CAS No: NA</p>	Mirtazepine	
237	<p>N-Nitroso Mirtazepine INT Chemical Name: 1-methyl-4-nitroso-2-phenylpiperazine M.F: C₁₁H₁₅N₃O MW: 205.26 CAS No: NA</p>	Mirtazepine	
238	<p>N-Nitroso Mirtazepine INT Chemical Name: tert-butyl-4-nitroso-3-phenyl piperazine-1-carboxylate M.F: C₁₅H₂₁N₃O₃ MW: 291.35 CAS No: NA</p>	Mirtazepine	



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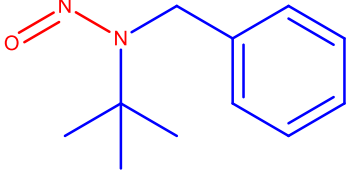
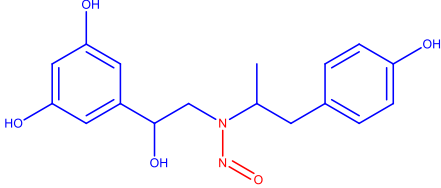
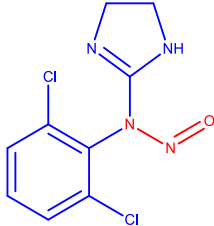
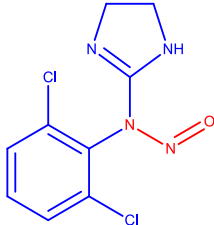
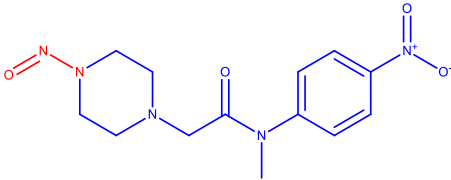
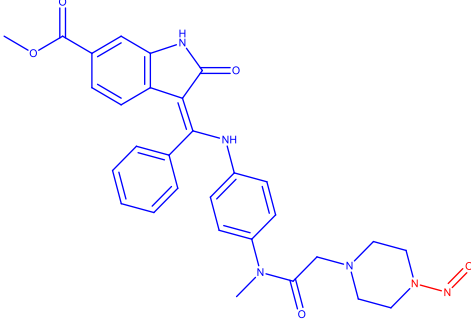
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239	<p>N-Nitroso Imiquimod Chemical Name: 4-(methyl(nitroso)amino)-3-nitrobenzoic acid M.F: C₈H₇N₃O₅ MW: 225.16 CAS No: NA</p>	Imiquimod	
240	<p>N-Nitroso Norfloxacin Chemical Name: 1-ethyl-6-fluoro-7-(4-nitrosopiperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid M.F: C₁₆H₁₇FN₄O₄ MW: 348.33 CAS No: NA</p>	Norfloxacin	
241	<p>N-Nitroso Mirtazepine INT Chemical Name: 4-Methyl-1-Nitroso-2-phenylpiperazine M.F: C₁₁H₁₅N₃O MW: 205.26 CAS No: NA</p>	Mirtazepine	
242	<p>N-Nitroso Mirtazepine INT Chemical Name: 1-methyl-4-nitroso-2-phenylpiperazine M.F: C₁₁H₁₅N₃O MW: 205.26 CAS No: NA</p>	Mirtazepine	
243	<p>N-Nitroso Mirtazepine INT Chemical Name: tert-butyl-4-nitroso-3-phenyl piperazine-1-carboxylate M.F: C₁₅H₂₁N₃O₃ MW: 291.35 CAS No: NA</p>	Mirtazepine	
244	<p>N-Nitroso Silodosin Chemical Name: (R)-1-(3-Hydroxypropyl)-5-(2-(nitroso(2-(2-(2,2,2-trifluoroethoxy)phenoxy)ethyl)amino)propyl)indoline-7-carboxamide M.F: C₂₅H₃₁F₃N₄O₅ MW: 524.53 CAS No: NA</p>	Silodosin	



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245	<p>N-Nitroso Terbutaline INT Chemical Name: N-benzyl-N-(tert-butyl)nitrous amide M.F: C₂₅H₃₁F₃N₄O₅ MW: 524.53 CAS No: 20002-25-9</p>	Terbutaline	
246	<p>N-Nitroso Feneterol Chemical Name: N-(2-(3,5-Dihydroxyphenyl)-2-hydroxyethyl)-N-(1-(4-hydroxyphenyl)propan-2-yl)nitrous amide M.F: C₁₇H₂₀N₂O₅ MW: 332.35 CAS No: NA</p>	Feneterol	
247	<p>N-Nitroso Clonidine Chemical Name: N-(2,6-Dichlorophenyl)-N-(4,5-dihydro-1H-imidazol-2-yl)nitrous amide M.F: C₉H₈Cl₂N₄O MW: 259.09 CAS No: NA</p>	Clonidine	
248	<p>N-Nitroso Lumefantrine Chemical Name: N-(2,6-Dichlorophenyl)-N-(4,5-dihydro-1H-imidazol-2-yl)nitrous amide M.F: C₉H₈Cl₂N₄O MW: 259.09 CAS No: NA</p>	Lumefantrine	
249	<p>N-Nitroso Nintedanib Impurity 3 Chemical Name: N-Methyl-N-(4-nitrophenyl)-2-(4-nitropiperazin-1-yl)acetamide M.F: C₃₀H₃₀N₆O₅ MW: 554.60 CAS No: NA</p>	Nintedanib	
250	<p>Nintedanib des methyl Nitroso Chemical Name: methyl(z)-3(((4-(N-methyl-2-(4-nitrosopiperazin-1-yl)acetamido)phenyl)amino)(Phenyl)methylene)-2-oxoindoline-6-carboxylate M.F: C₁₃H₁₇N₅O₄ MW: 307.03 CAS No: NA</p>	Nintedanib	



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251	<p>N-Nitroso Piperaquine Impurity A Chemical Name: 7-Chloro-4-(4-nitrosopiperazin-1-yl)quinoline M.F:C₁₃H₁₃ClN₄O MW: 276.7 CAS No: 32863-63-1</p>	Piperaquine	
252	<p>N-Nitroso Mirabegron (S) Isomer Chemical Name: (S)-2-(2-aminothiazol-4-yl)-N-(4-(2-((2-hydroxy-2-phenylethyl)(nitroso)amino)ethyl)phenyl)acetamide M.F:C₂₁H₂₃N₅O₃S MW: 425.50 CAS No: NA</p>	Mirabegron(S) isomer	
253	<p>N-Nitroso Cetrizine EP Impurity A Chemical Name: 1-(4-Chloro-benzhydryl)-4-nitroso-piperazine M.F:C₁₇H₁₈ClN₃O MW: 315.80 CAS No: 2005-04-1</p>	Cetrizine	
254	<p>N-Nitrosodesipramine Chemical Name: 10,11-Dihydro-N-methyl-N-nitroso-5H-dibenz[b,f]azepine-5-propanamine M.F:C₁₈H₂₁N₃O MW: 295.38 CAS No: 57164-17-7</p>	Imipramine	
255	<p>N-Nitroso Rasagiline Chemical Name: (R)-N-(2,3-dihydro-1H-inden-1-yl)-N-(prop-2-yn-1-yl)nitrous amide M.F: C₁₂H₁₂N₂O MW: 200.2 CAS No: 2470278-90-9</p>	Rasagiline	
256	<p>N-Nitroso 1-deoxy-1-octylamino-D-Glucitol Chemical Name: N-octyl-N-((2S,3R,4R,5R)-2,3,4,5,6-pentahydroxyhexyl)nitrous amide M.F: C₁₄H₃₀N₂O₆ MW: 322.40 CAS No: NA</p>	1-deoxy-1-octylamino-D-Glucitol	



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257	<p>N-Nitroso Teragliptin Chemical Name: 1-Nitrosopiperidin-3-amine M.F: C₅H₁₁N₃O MW: 129.16 CAS No: NA</p>	Teragliptin	
258	<p>N-Nitroso Lumateperone Intermediate Chemical Name: (6bR,10aS)-3-methyl-8-nitroso-2,3,6b,7,8,9,10,10a-octahydro-1H-pyrido[3',4':4,5]pyrrolo[1,2,3-de]quinoxaline M.F: C₁₄H₁₈N₄O MW: 258.32 CAS No: NA</p>	Lumateperone Intermediate	
259	<p>N-Nitroso Metformin Chemical Name: Nitroso n-methyl biguanide M.F: C₃H₈N₆O MW: 144.14 CAS No: NA</p>	Metformin	
260	<p>N-Nitroso Fluoxetine Impurity A Chemical Name: N-(3-Hydroxy-3-phenylpropyl)-N-methylnitrous amide M.F: C₁₀H₁₄N₂O₂ MW: 194.2 CAS No: 2659259-65-9</p>	Fluoxetine	
261	<p>N-Nitroso Vortioxetine Chemical Name: 1-(2-((2,4-Dimethylphenyl)thio)phenyl)-4-nitrosopiperazine M.F: C₁₈H₂₁N₃OS MW: 327.44 CAS No: NA</p>	Vortioxetine	
262	<p>N-Nitroso Apalutamide Amine Impurity Chemical Name: 4-((1-cyanocyclobutyl)(nitroso)amino)-2-fluoro-N-methylbenzamide M.F: C₁₃H₁₃FN₄O₂ MW: 276.27 CAS No: NA</p>	Apalutamide	



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263	<p>N-Nitroso Tofacitinib Intermediate Chemical Name: N-methyl-N-((3R,4R)-4-methyl-1-nitrosopiperidin-3-yl)-7H-pyrrolo[2,3-d]pyrimidin-4-amine M.F: C₁₃H₁₈N₆O MW: 274.32 CAS No: NA</p>	Tofacitinib	
264	<p>N-Nitroso Lumefantrine Intermediate Chemical Name: (Z)-N-butyl-N-(2-(2,7-dichloro-9-(4-chlorobenzylidene)-9H-fluoren-4-yl)-2-hydroxyethyl)nitrous amide M.F: C₂₆H₂₃Cl₃N₂O₂ MW: 501.83 CAS No: NA</p>	Lumefantrine	
265	<p>N-Nitroso Betaxalol Chemical Name: N-(3-(4-(2-(cyclopropylmethoxy)ethyl)phenoxy)-2-hydroxypropyl)-N-isopropyl nitrous amide M.F: C₁₈H₂₈N₂O₄ MW: 336.43 CAS No: NA</p>	Betaxalol	
266	<p>N,N'-Dinitroso Trientine Chemical Name: N,N'-(ethane-1,2-diyl)bis(N-(2-aminoethyl)nitrous amide) M.F: C₆H₁₆N₆O₂ MW: 204.23 CAS No: NA</p>	Trientine	
267	<p>N-Nitroso Olaptadine Chemical Name: (Z)-2-(11-(3-(methyl(nitroso)amino)propylidene)-6,11-dihydrodibenzo[b,e]oxepin-2-yl)acetic acid M.F: C₂₀H₂₀N₂O₄ MW: 352.38 CAS No: NA</p>	Olaptadine	
268	<p>N-Nitroso Didecylamine Chemical Name: N,N-Didecyl nitrous amide M.F: C₂₀H₄₂N₂O MW: 326.6 CAS No: 69112-95-4</p>	Didecylamine	



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269	<p>N-Nitroso Dicycleverine Chemical Name: 2-(ethyl(nitroso)amino)ethyl [1,1'-bi(cyclohexane)]-1-carboxylate M.F: C₁₇H₃₀N₂O₃ MW: 310.43 CAS No: NA</p>	Dicycleverine	
270	<p>N-Nitroso Vonoprazon Chemical Name: N-((5-(2-fluorophenyl)-1-(pyridin-3-ylsulfonyl)-1H-pyrrol-3-yl)methyl)-N-methylnitrosous amide M.F: C₁₇H₁₅FN₄O₃S MW: 374.39 CAS No: NA</p>	Vonoprazon	
271	<p>N-Nitroso Gatifloxacin Chemical Name: 1-cyclopropyl-6-fluoro-8-methoxy-7-(3-methyl-4-nitrosopiperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid M.F: C₁₉H₂₁FN₄O₅ MW: 404.39 CAS No: NA</p>	Gatifloxacin	
272	<p>N-Nitroso R-3-boc-amino piperidine Chemical Name: N-Nitroso R-3-boc-amino piperidine M.F: C₁₀H₁₉N₃O₃ MW: 229.28 CAS No: NA</p>	R-3-boc-amino piperidine	
273	<p>N-Nitroso 3-boc-amino piperidine Chemical Name: N-Nitroso 3-boc-amino piperidine M.F: C₁₀H₁₉N₃O₃ MW: 229.28 CAS No: NA</p>	3-boc-amino piperidine	
274	<p>N-Nitroso Apixaban Impurity 2 Chemical Name: 6-(4-((5-amino-5-oxopentyl)(nitroso)amino)phenyl)-1-(4-methoxyphenyl)-7-oxo-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide M.F: C₂₅H₂₇N₇O₅ MW: 505.53 CAS No: NA</p>	Apixaban	



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275	<p>N-Nitroso Apixaban Impurity 2 Chemical Name: 6-(4-((5-amino-5-oxopentyl)(nitrosoamino)phenyl)-1-(4-methoxyphenyl)-7-oxo-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide M.F: C₂₅H₂₇N₇O₅ MW: 505.53 CAS No: NA</p>	Apixaban	
276	<p>N-Nitroso Clobazam Chemical Name: N-(5-chloro-2-nitrophenyl)-N-phenylnitrous amide M.F: C₁₂H₈ClN₃O₃ MW: 277.66 CAS No: NA</p>	Clobazam	
277	<p>N-Nitroso 4-METHYL AMINE BENZOIC ACID Chemical Name: N-Nitroso 4-METHYL AMINE BENZOIC ACID M.F: C₈H₈N₂O₃ MW: 180.16 CAS No: 5757-76-6</p>	4-METHYL AMINE BENZOIC ACID	
278	<p>N-Nitroso (S)-Diethyl2-H(methylamino)benzamido pentanedioate Chemical Name: N-Nitroso (S)-Diethyl2-H(methylamino)benzamido pentanedioate M.F: C₁₇H₂₃N₃O₆ MW: 365.38 CAS No: NA</p>	-	
279	<p>N-Nitroso Temazepam EP Impurity A Chemical Name: N-(2-benzoyl-4-chlorophenyl)-N-methylnitrous amide M.F: C₁₄H₁₁ClN₂O₂ MW: 274.70 CAS No: NA</p>	Temazepam	



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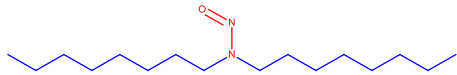
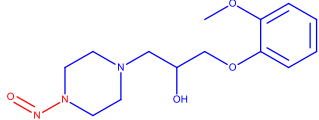
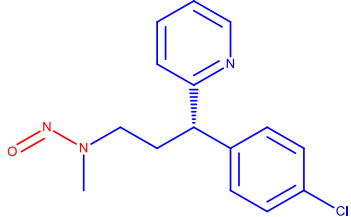
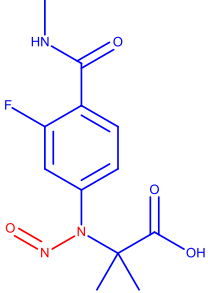
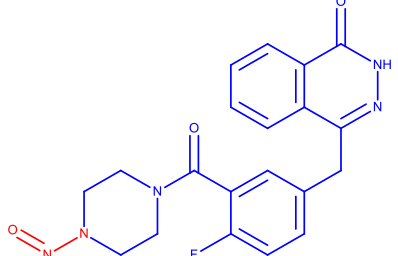
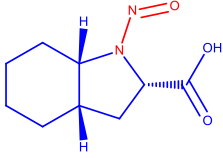
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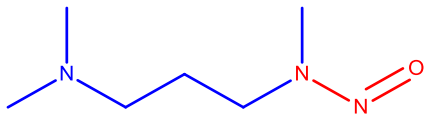
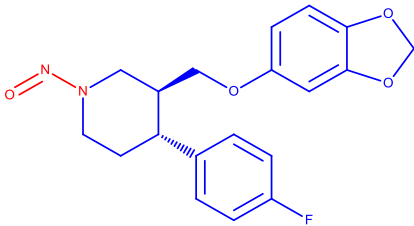
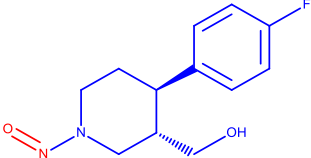
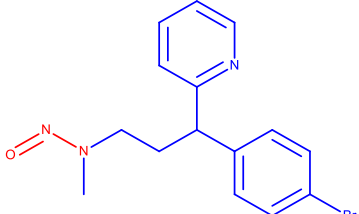
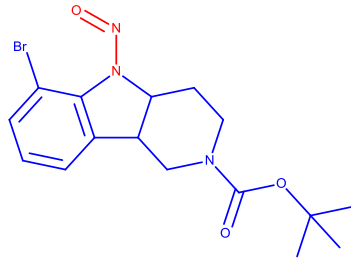
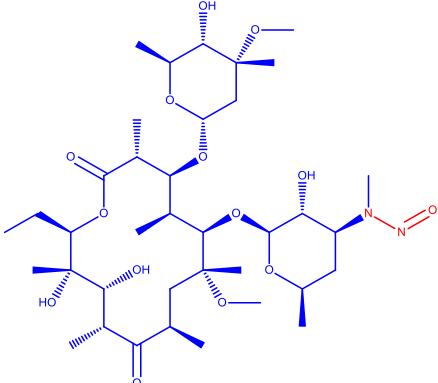
280	<p>N-Nitroso Vortioxetine Intermediate Chemical Name: Tert-butyl 4-nitrosopiperazine-1-carboxylate M.F: C₉H₁₇N₃O₃ MW:215.3 CAS No: NA</p>	Vortioxetine	
281	<p>N-Nitroso 4-piperazine-1-yl-phenol Chemical Name: 4-(4-nitrosopiperazin-1-yl)phenol M.F: C₁₀H₁₃N₃O₂ MW:207.23 CAS No: NA</p>	Terconazole	
282	<p>N-Nitroso Tolvaptan Intermediate Chemical Name: 7-chloro-1-nitroso-3,4-dihydro-1H-benzo[b]azepin-5(2H)-one M.F: C₁₀H₉ClN₂O₂ MW:224.64 CAS No: NA</p>	Tolvaptan	
283	<p>N-Nitroso Articaïne Chemical Name: Methyl 4-methyl-3-(2-(nitroso(propyl)amino)propanamido)thiophene-2-carboxylate M.F: C₁₃H₁₉N₃O₄S MW:313.37 CAS No: NA</p>	Articaïne	
284	<p>N-Nitroso Sarcosine (ethyl ester) Chemical Name: Ethyl 2-[methyl(nitroso)amino]acetate M.F: C₅H₁₀N₂O₃ MW:146.14 CAS No: NA</p>	Sarcosine(Ethyl Ester)	
285	<p>N-Nitroso Flecaïnide Intermediate Chemical Name: (1-nitrosopiperidine-4-yl)Methanamine M.F: C₆H₁₃N₃O MW:143.19 CAS No: NA</p>	Flecaïnide KSM	



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286	<p>N-Nitroso Dioctylamine Chemical Name: N,N-dioctylnitrous amide M.F: C₁₆H₃₄N₂O MW:270.45 CAS No: NA</p>	Dioctylamine	
287	<p>N-Nitroso Ranolazine Impurity C Chemical Name: 1-(2-methoxyphenoxy)-3-(4-nitrosopiperazin-1-yl)propan-2-ol M.F: C₁₄H₂₁N₃O₄ MW:295.33 CAS No: NA</p>	Ranolazine	
288	<p>N-Nitroso S-Chlorophenaramine Chemical Name: (S)-N-(3-(4-Chlorophenyl)-3-(pyridin-2-yl)propyl)-N-methylnitrous amide M.F: C₁₅H₁₆ClN₃O MW:289.76 CAS No: NA</p>	Chlorophenaramine	
289	<p>N-Nitroso Enzalutamide Intermemdiat Chemical Name: 2-((3-fluoro-4-(methylcarbamoyl)phenyl)(nitroso)amino)-2-methylpropanoic acid M.F: C₁₂H₁₄FN₃O₄ MW:283.26 CAS No: NA</p>	Enzalutamide Intermemdiat	
290	<p>N-Nitroso Olaparib Intermediate Chemical Name: 4-(4-Fluoro-3-(4-nitrosopiperazine-1-carbonyl)benzyl)phthalazin-1(2H)-one M.F: C₂₀H₁₈FN₅O₃ MW: 395.4 CAS No: 2742659-74-9</p>	Olaparib Intermediate	
291	<p>N-Nitroso Perindopril Intermediate Chemical Name: (2S,3aS,7aS)-1-nitrosooctahydro-1H-indole-2-carboxylic acid M.F: C₉H₁₄N₂O₃ MW: 198.22 CAS No: NA</p>	Perindopril Intermediate	

292	<p>N-Nitroso-N-methyl amino propane Chemical Name: N-(3-(dimethylamino)propyl)-N-methylnitrous amide M.F: C₆H₁₅N₃O MW: 145.20 CAS No: NA</p>	-	
293	<p>N-Nitroso Paroxetine impurity Chemical Name: (3S,4R)-3-((benzo[d][1,3]dioxol-5-yl)oxy)methyl)-4-(4-fluorophenyl)-1-nitrosopiperidine M.F: C₁₉H₁₉FN₂O₄ MW: 358.4 CAS No: 2361294-43-9</p>	Paroxetine	
294	<p>N-Nitroso Paroxetine EP Impurity I Chemical Name: ((3S,4R)-4-(4-fluorophenyl)-1-nitrosopiperidin-3-yl)methanol M.F: C₁₂H₁₅FN₂O₂ MW: 238.26 CAS No: NA</p>	Paroxetine	
295	<p>N-Nitroso Brompheniramine Chemical Name: N-(3-(4-bromophenyl)-3-(pyridin-2-yl)propyl)-N-methylnitrous amide M.F: C₁₅H₁₆BrN₃O MW: 334.21 CAS No: NA</p>	Brompheniramine	
296	<p>N-Nitroso Lumatoperon Chemical Name: tert-butyl 6-bromo-5-nitroso-3,4,4a,5-tetrahydro-1H-pyrido[4,3-b]indole-2(9bH)-carboxylate M.F: C₁₆H₂₀BrN₃O₃ MW: 382.25 CAS No: NA</p>	Lumatoperon	
297	<p>N-Nitroso-Desmethyl Clarithromycin Chemical Name: N-((2S,3R,4S,6R)-2-(((3R,4S,5S,6R,7R,9R,11R,12R,13S,14R)-14-Ethyl-12,13-dihydroxy-4-(((2R,4R,5S,6S)-5-hydroxy-4-methoxy-4,6-dimethyltetrahydro-2H-pyran-2-yl)oxy)-7-methoxy-3,5,7,9,11,13-hexamethyl-2,10-dioxooxacyclotetradecan-6-yl)oxy)-3-hydroxy-6-methyltetrahydro-2H-pyran-4-yl)-N-methylnitrous Amide M.F: C₃₇H₆₆N₂O₁₄ MW: 762.94 CAS No: 81103-11-9</p>	Clarithromycin	



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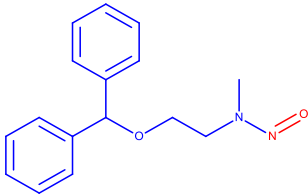
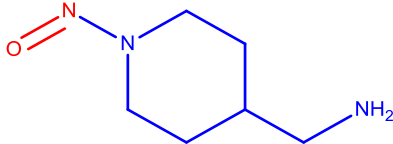
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298	<p>N-Nitroso Drotavarine Chemical Name: (Z)-1-(3,4-diethoxybenzylidene)-6,7-diethoxy-2-nitroso-1,2,3,4-tetrahydroisoquinoline M.F: C₂₄H₃₀N₂O₅ MW: 426.51 CAS No: NA</p>	Drotavarine	
299	<p>N-Nitroso Respiridone Difluorobenzoyl Impurity Chemical Name: (2,4-difluorophenyl)(1-nitrosopiperidin-4-yl)methanone M.F: C₁₂H₁₂F₂N₂O₂ MW: 254.23 CAS No: NA</p>	Respiridone	
300	<p>N-Nitroso Methotrexate EP Impurity L Chemical Name: (S)-2-(4-(methyl(nitroso)amino)benzamido)pentanedioic acid M.F: C₁₃H₁₅N₃O₆ MW: 309.27 CAS No: NA</p>	Methotrexate	
301	<p>N-Nitroso Labetolol Chemical Name: 2-hydroxy-5-(1-hydroxy-2-(nitroso(4-phenylbutan-2-yl)amino)ethyl)benzamide M.F: C₁₉H₂₃N₃O₄ MW: 357.40 CAS No: NA</p>	Labetolol	
302	<p>N-Nitroso Tizanidine Chemical Name: N-(5-chlorobenzo[c][1,2,5]thiadiazol-4-yl)-N-(4,5-dihydro-1H-imidazol-2-yl)nitrous amide M.F: C₉H₇ClN₆OS MW: 282.71 CAS No: NA</p>	Tizanidine	
303	<p>N-Nitroso Ketoconazole EP Impurity D Chemical Name: 1-(4-((2-((1H-imidazol-1-yl)methyl)-2-(2,4-dichlorophenyl)-1,3-dioxolan-4-yl)methoxy)phenyl)-4-nitrosopiperazine M.F: C₂₄H₂₅Cl₂N₅O₄ MW: 518.39 CAS No: NA</p>	Ketoconazole	



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304	N-Nitroso Diphenhydramine Chemical Name: N-(2-(Benzhydryloxy)ethyl)-N-methylnitrous amide M.F: C ₁₆ H ₁₈ N ₂ O ₂ MW: 270.33 CAS No: NA	Diphenhydramine	
305	N-Nitroso 4-Aminomethyl Piperidine Chemical Name: (1-nitrosopiperidin-4-yl)methanamine M.F: C ₆ H ₁₃ N ₃ O MW: 143.19 CAS No: NA	Flecanide KSM	

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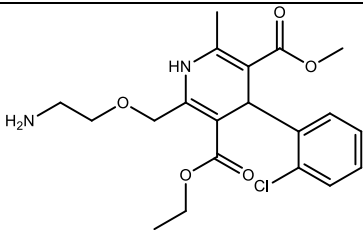
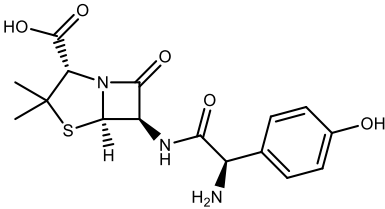
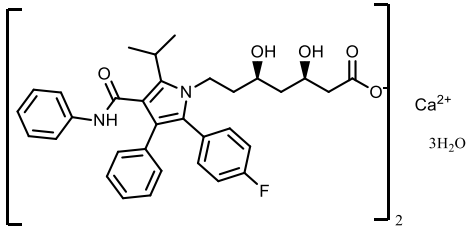
JUSTIFICATION REPORT

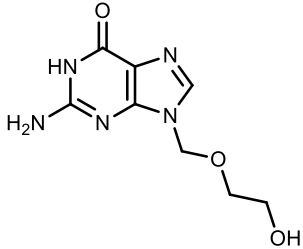
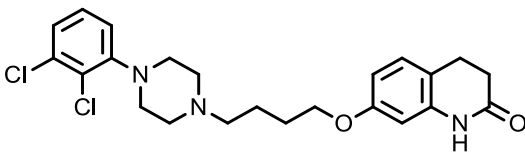
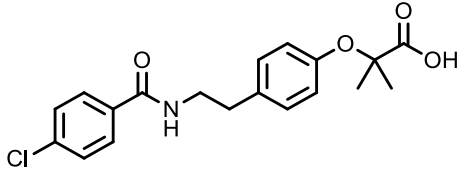
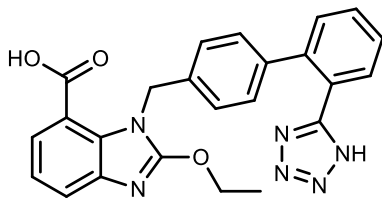
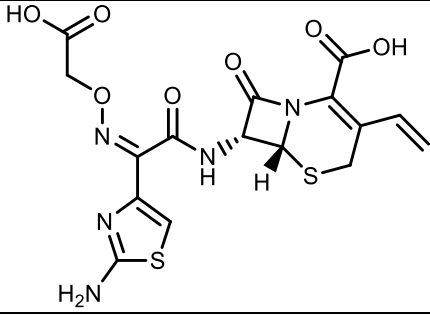
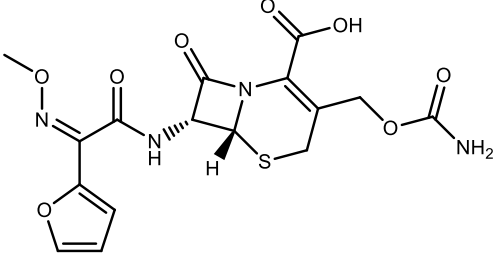
Nowadays it is mandatory to check the feasibility of Formation of Nitrosamine in any drug product

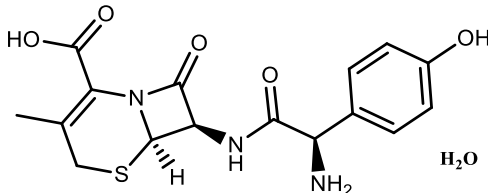
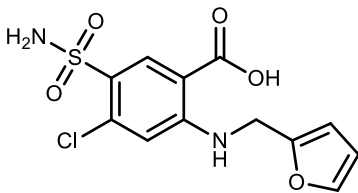
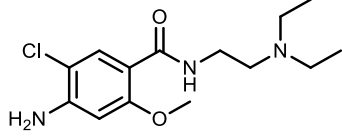
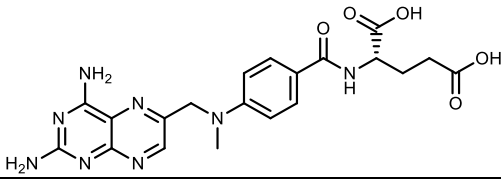
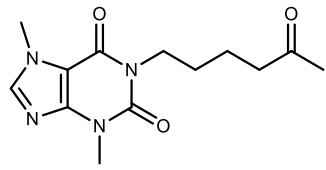
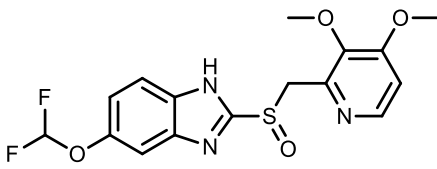
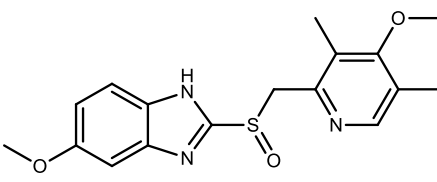
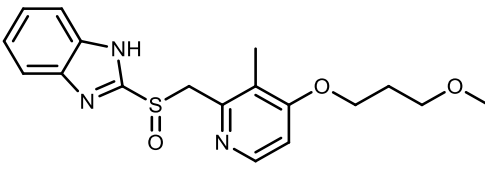
In many cases, **Nitrosamine formation is not possible**, therefore we are providing the justification reports by checking the synthesis feasibility of the compound

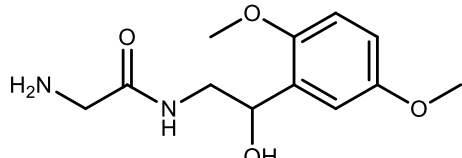
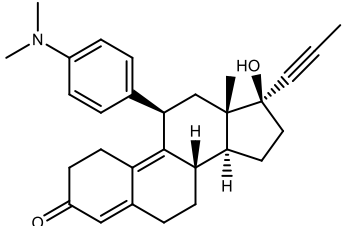
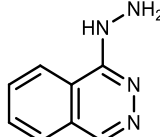
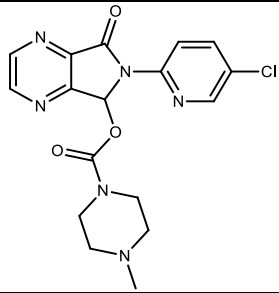
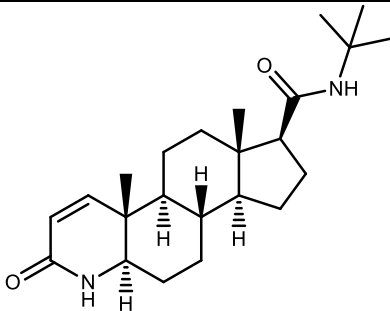
Justification report covers the below points and can be submitted to regulatory agency's

- Experimental data will be provided along with the analytical data
- Fundamental of Chemistry about feasibility of the formation
- Fundamental of Chemistry about the Stability
- Literature references will be shared if available
- Mechanistic aspect of product formation

Sr. No.	API Details	Structure
1	<p>API Name: Amlodipine Chemical Name: 3-ethyl 5-methyl 2-((2-aminoethoxy)methyl)-4-(2-chlorophenyl)-6-methyl-1,4-dihydropyridine-3,5-dicarboxylate MF: C₂₀H₂₅ClN₂O₅ MW: 408.88 CAS No: 88150-42-9</p>	
2	<p>API Name: Amoxicillin Chemical Name: (2S,5R,6R)-6-[[[(2R)-2-Amino-2-(4-hydroxyphenyl)acetyl]amino]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid MF: C₁₆H₁₉N₃O₅S MW: 365.4 CAS No: 26787-78-0</p>	
3	<p>API Name: Atorvastatin Chemical Name: Calcium bis[(3R,5R)-7-[2-(4-fluorophenyl)-3-phenyl-4-(phenylcarbamoyl)-5-(propan-2-yl)-1H-pyrrol-1-yl]-3,5-dihydroxyheptanoate] Trihydrate MF: 2(C₃₃H₃₄FN₂O₅)Ca²⁺ 3(H₂O) MW: 2(557.63) + (40.08) + 3(18.02) CAS No: 344423-98-9</p>	

4	<p>API Name: Acyclovir Chemical Name: 2-Amino-9-[(2-hydroxyethoxy)methyl]-1,9-dihydro-6H-purin-6-one MF: C₈H₁₁N₅O₃ MW: 225.2 CAS No:59277-89-3</p>	
5	<p>API Name: Aripiprazole Chemical Name: 7-(4-(4-(2,3-Dichlorophenyl)piperazin-1-yl)butoxy)-3,4-dihydroquinolin-2(1H)-one MF: C₂₃H₂₇Cl₂N₃O₂ MW: 448.4 CAS No: 129722-12-9</p>	
6	<p>API Name: Bezafibrate Chemical Name: 2-[4-[2-[(4-Chlorobenzoyl)amino]ethyl]phenoxy]-2-methylpropanoic acid MF: C₁₉H₂₀ClNO₄ MW: 361.8 CAS No:41859-67-0</p>	
7	<p>API Name: Candesartran Chemical Name: 2-Ethoxy-3-[[4-[2-(1H-tetrazol-5-yl)phenyl]phenyl]methyl]-3H-benzimidazole-4-carboxylic acid MF: C₂₄H₂₀N₆O₃ MW: 440.5 CAS No:139481-59-7</p>	
8	<p>API Name: Cefexime Chemical Name: (6R,7R)-7-[[[(Z)-2-(2-Aminothiazol-4-yl)-2-[(carboxymethoxy)imino]acetyl]amino]-3-ethenyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid MF: C₁₆H₁₅N₅O₇S₂ MW: 453.4 CAS No:79350-37-1</p>	
9	<p>API Name: Cefuroxime Chemical Name: (6R,7R)-3-((carbamoyloxy)methyl)-7-((Z)-2-(furan-2-yl)-2-(methoxyimino)acetamido)-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid MF: C₁₆H₁₆N₄O₈S MW: 424.4 CAS No: 55268-75-2</p>	

10	<p>API Name: Cefadroxil Chemical Name: (6R,7R)-7-[[[(2R)-2-Amino-2-(4-hydroxyphenyl)acetyl]amino]-3-methyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid monohydrate MF: C₁₆H₁₇N₃O₅S:H₂O MW: 363.4 : 18.0 CAS No:66592-87-8</p>	
11	<p>API Name: Furosemide Chemical Name: 4-Chloro-2-((furan-2-ylmethyl)amino)-5-sulfamoylbenzoic acid MF: C₁₂H₁₁ClN₂O₅S MW: 330.7 CAS No:54-31-9</p>	
12	<p>API Name: Metoclopramide Chemical Name: 4-Amino-5-chloro-N-(2-(diethylamino)ethyl)-2-methoxybenzamide MF: C₁₄H₂₂ClN₃O₂ MW: 299.8 CAS No: 364-62-5</p>	
13	<p>API Name: Methotrexate Chemical Name: (4-(((2,4-Diaminopteridin-6-yl)methyl)(methyl)amino)benzoyl)-L-glutamic acid MF: C₂₀H₂₂N₈O₅ MW: 454.4 CAS No: 59-05-2</p>	
14	<p>API Name: Pentoxifylline Chemical Name: 3,7-dimethyl-1-(5-oxohexyl)-3,7-dihydro-1H-purine-2,6-dione MF: C₁₃H₁₈N₄O₃ MW: 278.3 CAS No: 6493-05-6</p>	
15	<p>API Name: Pantoprazole Chemical Name: 5-(Difluoromethoxy)-2-(((3,4-dimethoxypyridin-2-yl)methyl)sulfinyl)-1H-benzo[d]imidazole MF: C₁₆H₁₅F₂N₃O₄S MW: 383.4 CAS No: 102625-70-7</p>	
16	<p>API Name: Omeprazole Chemical Name: 5-Methoxy-2-(((4-methoxy-3,5-dimethylpyridin-2-yl)methyl)sulfinyl)-1H-benzo[d]imidazole MF: C₁₇H₁₉N₃O₃S MW: 345.4 CAS No: 73590-58-6</p>	
17	<p>API Name: Rabeprezole Chemical Name: 2-(((4-(3-Methoxypropoxy)-3-methylpyridin-2-yl)methyl)sulfinyl)-1H-benzo[d]imidazole MF: C₁₈H₂₁N₃O₃S MW: 359.4 CAS No: 117976-89-3</p>	

18	<p>API Name: Midodrine Chemical Name: 2-Amino-N-(2-(2,5-dimethoxyphenyl)-2-hydroxyethyl)acetamide MF: C₁₂H₁₈N₂O₄ MW: 254.3 CAS No: 42794-76-3</p>	
19	<p>API Name: Mefipristone Chemical Name: (8S,11R,13S,14S,17S)-11-(4-(Dimethylamino)phenyl)-17-hydroxy-13-methyl-17-(prop-1-yn-1-yl)-1,2,6,7,8,11,12,13,14,15,16,17-dodecahydro-3H-cyclopenta[a]phenanthren-3-one MF: C₂₉H₃₅NO₂ MW: 429.6 CAS No: 84371-65-3</p>	
20	<p>API Name: Hydralazine Chemical Name: 1-Hydrazinophthalazine MF: C₈H₈N₄ MW: 160.2 CAS No: 86-54-4</p>	
21	<p>API Name: Zopiclone Chemical Name: 4-Methyl-1-piperazine-carboxylic Acid 6-(5-chloro-2-pyridinyl)-6,7-dihydro-7-oxo-5H-pyrrolo[3,4-b]pyrazin-5-yl Ester MF: C₁₇H₁₇ClN₆O₃ MW: 388.81 CAS No: 43200-80-2</p>	
22	<p>API Name: Finasteride Chemical Name: (5a,17b)-N-(1,1-Dimethylethyl)-3-oxo-4-aza-androst-1-ene-17-carboxamide MF: C₂₃H₃₆N₂O₂ MW: 372.5 CAS No: 98319-26-7</p>	



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Ministry of MSME, Govt. of India

AZIDO IMPURITIES

The Azido Impurity – also known as **azidomethyl-biphenyl-tetrazole, or AZBT** – is not part of the nitrosamine family. But nitrosamines and AZBT can both occur as by-products during the synthesis of sartan active pharmaceutical ingredients (APIs) with tetrazole rings.

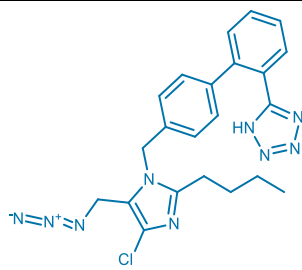
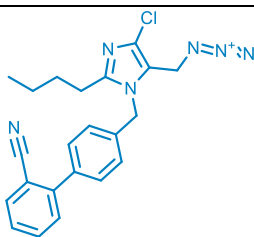
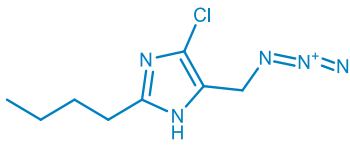
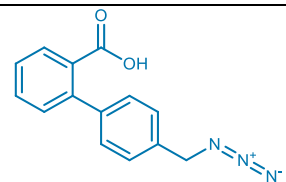
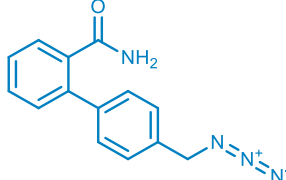
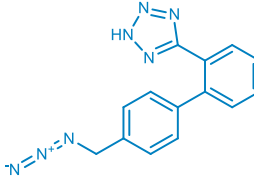
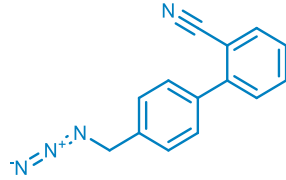
Both impurities are also classed as mutagens – or chemical substances that can cause a change in the DNA of a cell.

The parallels between azido impurities and nitrosamines in sartans do not end there, however.

In November 2019, the US Food and Drug Administration (FDA) warned the producers of valsartan APIs about “several current good manufacturing practice deviations”

In April 2021, the European Directorate for the Quality of Medicines & HealthCare (EDQM) reported that it had received information about the possible presence of potentially mutagenic azido impurities in certain sartan active substances.

These recent investigations recently resulted in the identification of azido impurity that has so far only been detected in losartan potassium: 5-[4'-[(5-(azidomethyl)-2-butyl-4-chloro-1H-imidazol-1-yl)methyl]-[1,1'-biphenyl]2-yl]-1H-tetrazole (**CAS 727718-93-6**) (“**losartan azido impurity**”). This impurity has tested positive in a bacterial mutagenicity (Ames) test.

SR.NO.	AZIDO IMPURITY	PAREN TDRUG	STRUCTURE
1	Losartan Azide Impurity Chemical name: 5-(4'-((5-(azidomethyl)-2-butyl-4-chloro-1H-imidazol-1-yl)methyl)-[1,1'-biphenyl]-2-yl)-1H-tetrazole MF: C ₂₂ H ₂₂ ClN ₉ MW: 447.9 CAS No: 727718-93-6	Valsartan	
2	Losartan Impurity Chemical name: 4'-((5-(azidomethyl)-2-butyl-4-chloro-1H-imidazol-1-yl)methyl)-[1,1'-biphenyl]-2-carbonitrile MF: C ₂₂ H ₂₁ ClN ₆ MW: 404.90 CAS No: NA	Valsartan	
3	Losartan Impurity 12 Chemical name: 5-(Azidomethyl)-2-butyl-4-chloro-1H-imidazole MF: C ₈ H ₁₂ ClN ₅ MW: 213.67 CAS No: 2353190-33-5	Valsartan	
4	Br OTBN azide acid Chemical name: 4'-(azidomethyl)-[1,1'-biphenyl]-2-carboxylic acid MF: C ₁₄ H ₁₁ N ₃ O ₂ MW: 253.26 CAS No: NA	Valsartan	
5	Br OTBN azide amide Chemical name: 4'-(azidomethyl)-[1,1'-biphenyl]-2-carboxamide MF: C ₁₄ H ₁₂ N ₄ O MW: 252.27 CAS No: NA	Valsartan	
6	Irbesartan Impurity 15 Chemical name: 5-[4'-(Azidomethyl)[1,1'-biphenyl]-2-yl]-2H-tetrazole MF: C ₁₄ H ₁₁ N ₇ MW: 277.28 CAS No: 152708-24-2	Valsartan	
7	Irbesartan Impurity 14 Chemical name: 4'-(azidomethyl)-[1,1'-biphenyl]-2 carbonitrile MF: C ₁₄ H ₁₀ N ₄ MW: 234.25 CAS No: 133690-91-2	Valsartan	

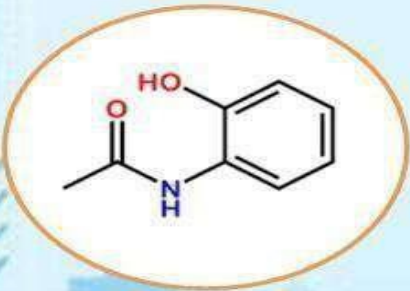
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Working Standards



Nitrosamines



**Impurity
Reference Standards**



**API
Intermediates**



Analytical Services



Custom Synthesis



ISO 17034:2016
General Requirements for the Competence of
Reference Material Producers



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