

Scientific Documentation

Pyrilamine Maleate, USP

Not appropriate for regulatory submission. Please visit www.spectrumchemical.com or contact Tech Services for the most up-to-date information contained in this information package.

Spectrum Chemical Mfg Corp 769 Jersey Avenue New Brunswick, NJ 08901 Phone 732.214.1300





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Product Specification Certificate of Analysis Safety Data Sheet (SDS) Certification of Current Good Manufacturing Practices (cGMP) Manufacturing Process Flowchart Technical Statements Elemental Impurities Statement Residual Solvents Statement General Label Information – Sample Label



Specification for Pyrilamine Maleate, USP (PY105)

Item Number	PY105
Item	Pyrilamine Maleate, USP
CAS Number	59-33-6
Molecular Formula	$C_{17}H_{23}N_{3}O \cdot C_{4}H_{4}O_{4}$
Molecular Weight	401.47
MDL Number	
Synonyms	Mepyramine Hydrogen Maleate ; Pyranisamine Maleate ; Midol ; Mepyramine Maleate

Test	Specificat	tion
	Min	Max
ASSAY (DRIED BASIS)	98.0	100.5 %
MELTING RANGE	99°	103°C
LOSS ON DRYING		0.5 %
RESIDUE AFTER IGNITION		0.1 %
RELATED COMPOUNDS		AS REPORTED
INDIVIDUAL	INDIVIDUAL IMPURITIES	
TOTAL	TOTAL IMPURITIES	
ELEMENTAL IMPURITIES		AS REPORTED
IDENTIFICATION (A)	SPECTRUM MATCHES REFERENCE	
IDENTIFICATION (B)	ABSORBTIVITY MATCHES STANDARD	
EXPIRATION DATE		
DATE OF MANUFACTURE		
APPEARANCE		
RESIDUAL SOLVENTS		AS REPORTED

Spectrum Chemical Mfg Corp

Corporate Headquarters:	West Coast Facility:
769 Jersey Ave.	14422 S. San Pedro St.
New Brunswick, NJ 08901	Gardena, CA 90248
732.214.1300	310.516.8000



Certificate Of Analysis

Item Number	PY105	Lot Number	4LB0004
Item	Pyrilamine Maleate, USP	Manufacturer Lot	SLL/M/1221037
CAS Number	59-33-6	Manufacturer Code	14154
Molecular Formula	$C_{17}H_{23}N_{3}O \cdot C_{4}H_{4}O_{4}$	Molecular Weight	401.47

TFCT	SPECIFICATION		DECLUT	
TEST	MIN	MAX	RESULT	
ASSAY (DRIED BASIS)	98.0	100.5 %	100.0%	
MELTING RANGE	99°	103°C	101-102°C	
LOSS ON DRYING		0.5 %	0.005%	
RESIDUE AFTER IGNITION		0.1 %	0.05%	
RELATED COMPOUNDS		AS REPORTED	COMPLIES WITH STANDARD	
INDIVIDUAL	INDIVIDUAL IMPURITIES		0.0%	
TOTAL	TOTAL IMPURITIES		0.0%	
ELEMENTAL IMPURITIES		AS REPORTED	COMPLIES WITH STANDARD	
IDENTIFICATION (A)	SPECTRUM MATCHES REFERENCE		SPECTRUM MATCHES REFERENCE	
IDENTIFICATION (B)	ABSORBTIVITY MATCHES STANDARD		ABSORBTIVITY MATCHES STANDARD	
EXPIRATION DATE			30-NOV-2026	
DATE OF MANUFACTURE			01-DEC-2021	
APPEARANCE			WHITE POWDER	
RESIDUAL SOLVENTS		AS REPORTED	RESIDUAL SOLVENTS ARE PRESENT	
CLASS 2 (SOLVENT) / METHANOL			<3000 PPM	
CLASS 2 (solvent) / XYLENE			<2170 PPM	
CLASS 3 (solvent) / 2-PROPANOL			<5000 PPM	

Certificate of Analysis Results Entered By:

GHERRERA Genaro Herrera 17-MAR-22 06:30:30

Spectrum Chemical Mfg Corp 777 Jersey Avenue New Brunswick 08901 NJ



All pharmaceutical ingredients are tested using current edition of applicable pharmacopeia.

Read and understand label and SDS before handling any chemicals. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. It is the customer's responsibility to provide adequate hazardous material training and ensure that appropriate Personal Protective Equipment (PPE) is used before handling any chemical.

The Elemental Impurities standards implemented by USP and other Pharmaceutical Compendia reflect a growing understanding of the toxicology of trace levels of elemental impurities that can remain in drug substances originating from either raw materials or manufacturing processes. Identifying and quantifying impurities can be critical to predicting the best possible patient outcomes. Elemental Impurities has been a requirement of all products meeting USP/NF, EP and BP monographs since January 1, 2018. More information can be found in USP sections <232> Elemental Impurities – Limits and <233> Elemental Impurities – Procedures. Data for drug substances furnished by Spectrum Chemical Mfg. Corp can be used to ensure that patient daily exposures by oral administration to the selected elements are not exceeded in the formulation of pharmaceutical products.

Spectrum Chemical Mfg. Corp. repackages Active Pharmaceutical Ingredient chemicals provided by other manufacturers and suppliers. For traceability purposes, Spectrum's Certificate of Analysis contains an identifier code unique to each manufacturer or supplier, as well as the chemical's lot number provided on the original manufacturer Certificate of Analysis. This material is manufactured by Supriya Lifescience Limited at A - 5 / 2, Lote Parshuram Industrial Area, Ratnagiri, Maharashtra 415722, India (IND). Copies of the original Certificate of Analysis are available upon request from your Spectrum Sales Representative or by calling Spectrum's Quality Department at 1-800-772-8786.

GHERRERA Genaro Herrera 17-MAR-22 06:30:54

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SAFETY DATA SHEET

Preparation Date: 7/28/15	Revision date 03/27/2019	Revision Number: G2			
1. IDENTIFICATION					
Product identifier					
Product code: Product Name:	PY105 PYRILAMINE MALEATE, USP				
Other means of identification Synonyms: CAS #: RTECS # CI#:	Anisopyradamine Anthisan maleate Anthisan maleate Antihist Diaminide maleate N-Dimethylaminoethyl-N-p-methoxy-alpha-ami Pyridine, 2-((2-(dimethylamino)ethyl)(p-methox N,N-Dimethyl-N'-(4-methoxybenzyl)-N'-(2-pyrio 1,2-Ethanediamine, N-((4-methoxyphenyl)methyl)-N,N'-dimethyl-N- Mepyramine maleate N-p-Methoxybenzyl-N'-N'-dimethyl-N-alpha-py Minihist Neo-Antergan meleate Paraminyl maleate Pyra maleate Pyra maleate Pyranisamine maleate Stangen maleate Statomin maleate Thylogen maleate 59-33-6 UT122500 Not available	xybenzyl)amino)-, maleate (1:1) dyl)ethylenediamine maleate -2-pyridinyl-,(Z)-2-butenedioat			
Recommended use of the chen Recommended use: Uses advised against	nical and restrictions on use No information available. No information available				
<u>Supplier:</u>	Spectrum Chemical Mfg. Corp 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000				
Order Online At: Emergency telephone number Contact Person: Contact Person:	https://www.spectrumchemical.com Chemtrec 1-800-424-9300 Tom Tyner (USA - West Coast) Ibad Tirmiz (USA - East Coast)				
	2. HAZARDS IDENTIFICATION				

2. HAZARDS IDENTIFICATION

Classification

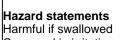
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3

Label elements

Warning



Causes skin irritation Causes serious eye irritation May cause respiratory irritation



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Avoid breathing dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area Wear protective gloves

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash it before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell Rinse mouth

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%	
Pyrilamine Maleate	59-33-6	100	

	4. FIRST AID MEASURES				
First aid measures					
General Advice:	National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.				
Skin Contact:	Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.				
Eye Contact:	Flush eyes with water for 15 minutes. Get medical attention.				
Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.				
Ingestion:	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.				
Most important symptoms and effe	ects, both acute and delayed				
Symptoms	Harmful if swallowed Causes serious eye irritation Causes skin irritation May cause respiratory irritation May cause hypermotility, diarrhea Convulsions Excitement Ataxia				
Indication of any immediate medic	al attention and special treatment needed				
Notes to Physician: Treat symptomatically.					
Protection of first-aiders First-Aid Providers: Avoid exposure contaminated clothing and equipmer	to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of t as bio-hazardous waste.				
	5. FIRE-FIGHTING MEASURES				
Extinguishing Media Suitable Extinguishing Media:	Dry chemical. Carbon dioxide (CO2). Water spray mist or foam.				
Unsuitable Extinguishing Medi	Unsuitable Extinguishing Media: No information available.				
Specific hazards arising from the chemical					
Hazardous combustion products Carbon monoxide. Carbon dioxide (CO2). Nitrogen oxides (NOx).					
Specific hazards	May be combustible at high temperatures.				
Special Protective Actions f	or Firefighters				
Product code: PY105	Product name: PYRILAMINE Page 3/12 MALEATE, USP				

Specific Methods:

No information available

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency proceduresPersonal Precautions:Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Remove all
sources of ignition. Avoid dust formation. Use personal protective equipment.Environmental precautionsPrevent further leakage or spillage if safe to do so. Prevent product from entering
drains. Prevent entry into waterways, sewers, basements or confined areas.Methods and material for containment and cleaning upMethods for containmentMethods for containmentStop leak if you can do it without risk. Cover with plastic sheet to prevent
spreading.Methods for cleaning upSweep up and shovel into suitable containers for disposal. Clean contaminated
surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Sensitive to light. Store in light-resistant containers. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents Bases

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Pyrilamine Maleate	59-33-6	None	None	None	None

Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Pyrilamine Maleate	59-33-6	None	None	None	None

Australia and Mexico

Component	CAS No	Australia	Mexico
Pyrilamine Maleate	59-33-6	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection:	Goggles or Safety glasses with side-shields.
Skin and body protection:	Long sleeved clothing Gloves Chemical resistant apron
Respiratory protection:	Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds), inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures:	Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product

). PHYSICAL AND CHEMICAL PROPERTIES	
	_

Physical state:	Appearance:	Color:
Solid	Crystalline powder.	White.
Odor:	Taste	Formula
No information available.	No information available.	C17H23N3O.C4H4O4
Molecular/Formula weight (g/mole)	: Flammability (solid, gas)	Flashpoint (°C/°F):
401.47 g/mole	no data available	>187.78°C (>370 °F)
Flash Point Tested according to:	Autoignition Temperature (°C/°F):	Lower Explosion Limit (%):
Closed cup	>360°C (>680°F)	No information available
Upper Explosion Limit (%):	Melting point/range(°C/°F):	Decomposition temperature(°C/°F):
No information available	99-103°C (210.2-217.4°F)	No information available
Boiling point/range(°C/°F):		

Product code: PY105

No information available

Specific gravity: No information available

Evaporation rate: No information available

Odor threshold (ppm): No information available

Miscibility: No information available Bulk density: No information available

рН 5.1

Vapor density: No information available

Partition coefficient (n-octanol/water): No information available

Solubility: Slightly soluble in Benzene Slightly soluble in Ether Freely soluble in alcohol Freely soluble in Chloroform **Density (g/cm3):** No information available

Vapor pressure @ 20°C (kPa): No information available

VOC content (g/L): No information available

Viscosity: No information available

10. STABILITY AND REACTIVITY

Reactivity Reactive with oxidizing agents

	Chemical	stability
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Stability:	Sensitive to light. Stable under recommended storage conditions.
Possibility of Hazardous Reactions	- Hazardous polymerization does not occur
Conditions to avoid:	Heat. Exposure to light. Ignition sources. Incompatible materials.
Incompatible Materials:	Oxidizing agents Bases
Hazardous decomposition products:	Carbon monoxide. Carbon dioxide. Nitrogen oxides (NOx).
Other Information Corrosivity:	No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure: Skin. Eyes. Inhalation. Ingestion.

Acute Toxicity

Component Information

Pyrilamine Maleate CAS No

59-33-6

LD50/oral/rat = = 513 mg/kg Oral LD50 Rat

LD50/oral/mouse = 220 mg/kg Oral LD50 Mouse LD50/dermal/rabbit = No information available LD50/dermal/rat = No information available LC50/inhalation/rat = No information available LC50/inhalation/mouse = No information available Other LD50 or LC50information = No information available

Product Information

LD50/oral/rat = Value - Acute Tox = 513 mg/kg

LD50/oral/mouse = Value - Acute Tox Oral = 220 mg/kg

LD50/dermal/rabbit Value - Acute Tox = No information available

LD50/dermal/rat VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat VALUE-Vapor = No information available VALUE-Gas = No information available VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse VALUE-Vapor = No information available VALUE - Gas = No information available VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:	Causes skin irritation.
Eye Contact:	Causes serious eye irritation.
Inhalation	May cause respiratory irritation.
Ingestion	Harmful if swallowed. May cause digestive (gastointestinal) tract irritation.
Aspiration hazard	No information available.
Delayed and immediate effects a	s well as chronic effects from short and long-term exposure
Chronic Toxicity	No information available.
Sensitization:	No information available.
Mutagenic Effects:	No information available

Carcinogenic effects:

Not considered carcinogenic.

Co	omponent	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic	Australia - Prohibited Carcinogenic	
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Durite state Male state 50,00,0 Natificial Natificial Natificial			
Pyrilamine Maleate 59-33-6 Not listed Not listed Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity	No data is available
Reproductive Effects:	No information available
Developmental Effects:	No information available
Teratogenic Effects:	No information available

Specific Target Organ Toxicity

STOT - single exposure	respiratory system.
STOT - repeated exposure	No information available.
Target Organs:	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects:	No data available.
Persistence and degradability:	No information available
Bioaccumulative potential:	No information available.
Mobility in soil Other adverse effects	No information available No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Pyrilamine Maleate	59-33-6	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: Proper Shipping Name: Hazard Class Not Regulated No information available No information available

Product code: PY105

Product name: PYRILAMINE MALEATE, USP **Subsidiary Class** No information available Packing group: No information available Emergency Response Guide No information available Number No data available Marine Pollutant No information available DOT RQ (lbs): **Special Provisions** No Information available Symbol(s): No information available **Description:** No information available

TDG (Canada)

UN-No: Proper Shipping Name: Hazard Class Subsidiary Risk: Packing Group: Marine Pollutant Description:

ADR

UN Number Proper Shipping Name: Transport hazard class(es) Packing group Subsidiary Risk:

IMDG

UN-No: Proper Shipping Name: Hazard Class: Subsidiary Risk: Packing Group: Marine Pollutant

RID

UN Number Proper Shipping Name: Transport hazard class(es) Subsidiary Risk: Packing group

ICAO (air)

UN-No: Proper Shipping Name: Hazard Class Subsidiary Risk: Packing Group:

ΙΑΤΑ

UN Number Proper Shipping Name: Transport hazard class(es) Subsidiary Risk: Packing group Precautionary Statements -Response Special Provisions Not Regulated No information available No information available

Not regulated No information available No information available No information available No information available

Not Regulated No information available No information available No information available No information available No information available

Not Regulated No information available No information available No information available No information available

Not Regulated No information available No information available No information available No information available

Not Regulated

No information available No information available No information available No information available No information available

No information available

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
Pyrilamine Maleate	59-33-6	PresentACTIV E	Not present	Not present	Not present	Present	Present	Present 200-422-7

U.S. Regulations

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male	Female
		_		Reproductive	Reproductive
				Toxicity	Toxicity:
Pyrilamine Maleate	59-33-6	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Pyrilamine Maleate	59-33-6	None	None	None	None	None

U.S. TSCA

Component		TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	
Pyrilamine Maleate	59-33-6	Not Applicable	Not Applicable

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification The WHMIS 2015 classification of this product has not been validated or reviewed yet. Information:

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Pyrilamine Maleate	59-33-6	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Pyrilamine Maleate	59-33-6	Not listed
Component		CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Pyrilamine Maleate	59-33-6	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Pyrilamine Maleate	59-33-6	

EU - CLP (1272/2008)

R-phrase(s)

R22 - Harmful if swallowed R36/37/38 - Irritating to eyes, respiratory system and skin

S -phrase(s)

S22 - Do not breathe dust

S36 - Wear suitable protective clothing

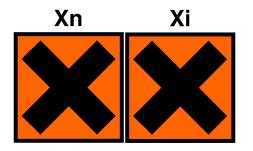
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Pyrilamine Maleate	59-33-6		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xn - Harmful Xi - Irritant



16. OTHER INFORMATION

Preparation Date:	7/28/15
Revision date	03/27/2019
Prepared by:	Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no

responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet

spectrum

Certification of Compliance with current Good Manufacturing Practices

Dear Valued Customer:

Spectrum Chemical Mfg Corp certifies that the following product(s) is produced, processed, packaged and held in compliance with current Good Manufacturing Practices (cGMP) in accordance with the applicable parts of 21 CFR, parts 210 and 211 of the Code of Federal Regulations.

Catalog Number	Product Name
PY105	Pyrilamine Maleate, USP

Spectrum is an FDA registered and inspected Drug Establishment. Our United States Food and Drug Administration (USFDA) Registration numbers are as follows:

Spectrum-Gardena, CA:	2020632
Spectrum-New Brunswick, NJ:	2246824

Thank you for your interest in Spectrum products. If we may be of further assistance, please feel free to contact the Quality Assurance department at 310-516-8000 or via email at <u>gualityassurance@spectrumchemical.com</u>

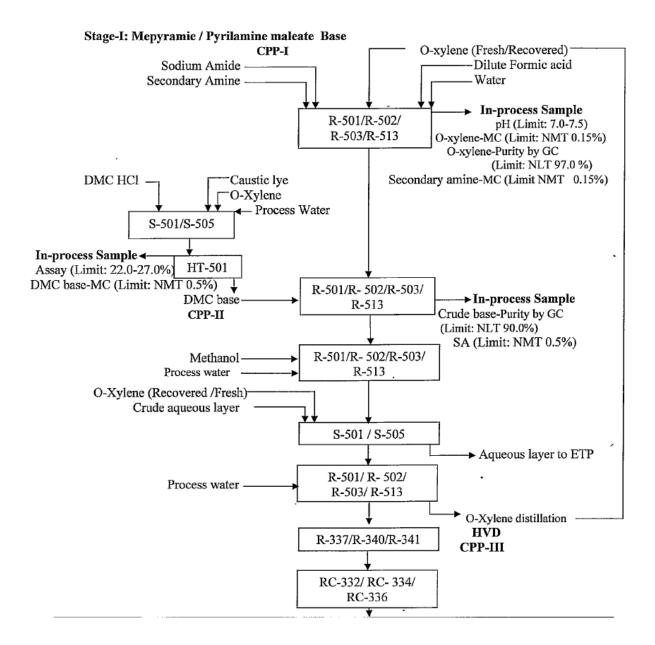
Sincerely,

Oulu Clamy

Oralia Chavez Quality Assurance Specialist



Manufacturing Process Flowchart Pyrilamine Maleate, USP (Cat# PY105)



CORPORATE HEADQUARTERS

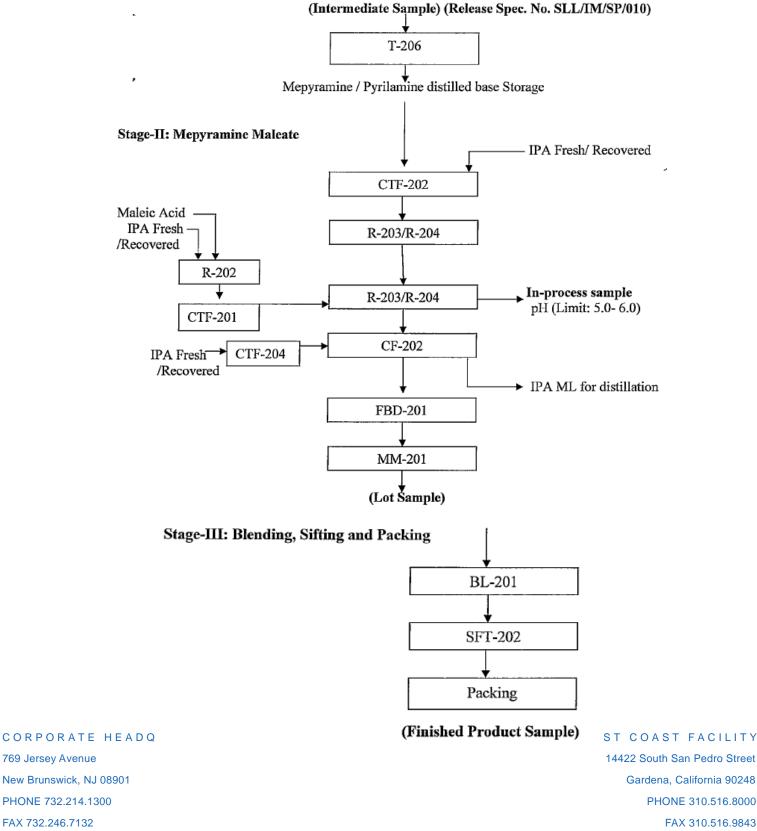
769 Jersey Avenue New Brunswick, NJ 08901 PHONE 732.214.1300

FAX 732.246.7132

WEST COAST FACILITY

14422 South San Pedro Street Gardena, California 90248 PHONE 310.516.8000 FAX 310.516.9843





New Brunswick, NJ 08901 PHONE 732.214.1300

FAX 732.246.7132

spectrum

PY105, Pyrilamine Maleate, USP

Source Statement

The above mentioned catalog item is manufactured by chemical synthesis. No animal or plant derived products are used in the manufacturing process.

BSE/TSE Statement

The above mentioned catalog item does not contain nor is manufactured using any animal derived products and is therefore, BSE/TSE free.

Allergen Statement

The above mentioned catalog item does not contain any of the following:

- Milk
- Egg
- Fish
- Shellfish
- Tree Nuts
- Wheat
- Peanuts
- Soy

- Cereals containing Gluten
- Celery
- Mustard
- Sesame Seed
- Corn
- Latex
- Sulfites > 10 ppm

EU Fragrance Allergen Statement

The above mentioned catalog item does not contain any of the 26 EU fragrance allergens listed in Annex III lines 67-92. These substances are not intentionally added to the following chemical and therefore are not expected to be present.

GMO Statement

The above mentioned catalog item is manufactured without the use of genetically modified organisms and is therefore GMO free.

Melamine Statement

The above mentioned catalog does not use or add melamine to the manufacturing process and is considered melamine-free.



Nitrosamine Statement

Based on knowledge of the manufacturing process, nitrosamine impurities are not known or suspected to be present in this material.

Animal Testing Statement

The above mentioned catalog item has not been tested on animals.

Organic Compliance Statement

The above mentioned catalog item has not been produced using GMOs, irradiation, ethylene oxide (EtO) or sewage sludge.

Shelf Life Statement

The above mentioned catalog item is typically assigned a shelf life of 60 months from the date of manufacture. The actual assigned shelf life for any specific lot should be referenced on the Certificate of Analysis.

Other Chemicals Statement

Spectrum does not have any reason to suspect the above mentioned catalog item contains any of the following chemicals. This product does not come into contact with these chemicals during packaging or storage:

- Aflatoxins
- Antibiotics
- Bisphenol A (BPA)
- CMR Substances

- Parabens
- Pesticides
- Phthalates
- Preservatives

spectrum

RE: Elemental Impurities - Pyrilamine Maleate, USP (Cat# PY105)

To Whom It May Concern:

Thank you for your interest in Spectrum high quality chemicals.

The above material complies with the USP<232>, <233> Elemental Impurities and the ICH Q3D Elemental Impurities Guideline. The following elemental impurities are likely to be present:

Elemental Impurity		Class	Expected Concentration
Cadmium	Cd	1	< 1 ppm
Lead	Pb	1	< 1 ppm
Arsenic	As	1	< 1 ppm
Mercury	Hg	1	< 0.5 ppm
Cobalt	Со	2A	< 1 ppm
Vanadium	V	2A	< 1 ppm
Nickel	Ni	2A	< 1 ppm

Other elemental impurities considered by USP <232>, <233> and ICH Q3D which are not addressed in the above mentioned table are not likely to be present. These substances are not used in the production process, are not intentionally added or known to be present in the above mentioned material.

This information is subject to change and is intended for risk assessment only. It is responsibility of the end user to evaluate suitability of any chemical for the intended use as well as to assess compound-specific limits of daily intake of metal impurities. For lot-specific information, please refer to the respective Certificate of Analysis.

If you have any further questions, please contact us by telephone at 1(800)772-8786 Option 2, or by email at <u>TechServices@spectrumchemical.com</u>.

Sincerely,

Technical Services Spectrum Chemical Mfg. Corp.

CORPORATE HEADQUARTERS

769 Jersey Avenue New Brunswick, NJ 08901 PHONE 732.214.1300 FAX 732.246.7132

WEST COAST FACILITY

14422 South San Pedro Street Gardena, California 90248 PHONE 310.516.8000 FAX 310.516.9843

AN ISO 9001:2015 REGISTERED COMPANY

www.spectrumchemical.com



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RE: Residual Solvents - Pyrilamine Maleate, USP (Cat# PY105)

To Whom It May Concern:

Thank you for your interest in Spectrum high quality chemicals.

The above mentioned catalog item complies with the requirements of USP <467> Residual Solvents and ICH Q3C Residual Solvents Guideline. The following solvents are likely to be present:

Residual Solvent	Class	Expected Concentration
Methanol	2	< 3000 ppm
Trichloroethene	2	< 2170 ppm
2-Propanol	3	< 5000 ppm

No Class 1 or other solvents are used or produced in the manufacturing process of this material.

For lot-specific information, please refer to the respective Certificate of Analysis.

If you have any further questions, please contact us by telephone at 1(800)772-8786 Option 2, or by email at <u>TechServices@spectrumchemical.com.</u>

Sincerely,

Technical Services Spectrum Chemical Mfg. Corp.

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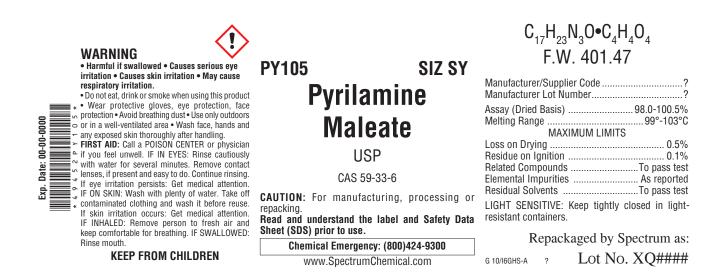
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Label Information

The Spectrum label presents technical and safety information in an easily understood format. Our technical specialists stay abreast of the latest requirements of the Globally Harmonized System for Classification and Labelling of Chemicals (GHS), as well as the Occupational Safety and Health Administration (OSHA), the Food and Drug Administration (FDA) and other government regulatory agencies in order to ensure compliance, accuracy and concise hazard communication. Below you will find a typical label example for this catalog item.



Spectrum Chemical Mfg Corp

Corporate Headquarters:

769 Jersey Ave. New Brunswick, NJ 08901 *West Coast Facility:* 14422 S. San Pedro St. Gardena, CA 90248 310.516.8000

732.214.1300