VILEVEV MB- methenamine, phenyl salicylate, sodium phosphate, monobasic, anhydrous, methylene blue anhydrous, and hyoscyamine sulfate tablet
Vilvet Pharmaceuticals Inc

Disclaimer: This drug has not been found by FDA to be safe and effective, and this labeling has not been approved by FDA. For further information about unapproved drugs, click here.

VILEVEV MB Tablets

Rx Only

Each tablet contains:

Methenamine	81.0 mg
Sodium Phosphate Monobasic	40.8 mg
Phenyl Salicylate	32.4 mg
Methylene Blue	10.8 mg
Hyoscyamine Sulfate	0.12 mg

Inactive Ingredients: Microcrystalline Cellulose, Croscarmellose Sodium, Magnesium Stearate, Stearic acid.

METHENAMINE. [100-97-0] 1, 3, 5, 7 – Tetraazatricyclo [3.3.1.-$1_{3,7}$] decane; hexamethylenetetramine; HMT; HMTA; hexamine; 1, 3, 5, 7- tetraazaadamantane hexamethylenemine; Uritone; Urotropin. $C_6H_{12}N_4$; mol wt 140.19; C 51.40%, H 8.63%, N 39.96%. Methenamine (hexamethylenetetramine) exists as colorless, lustrous crystals or white crystalline powder. Its solutions are alkaline to litmus. Freely soluble in water, soluble in alcohol and chloroform.

SODIUM PHOSPHATE MONOBASIC. [7558-80-7] Phosphoric acid sodium salt (1:1); Sodium biphosphate; sodium dihydrogen phosphate; acid sodium phosphate; monosodium orthophosphate; primary sodium phosphate; H_2NaO_4P; mol wt 119.98, H 1.68%, Na 19.16%, O 53.34%, P 25.82 %. Monohydrate, white, odorless slightly deliquesce crystals or granules. At 100 °C loses all its water; when ignited it converts to metaphosphate. It is freely soluble in water and practically insoluble in alcohol. The aqueous solution is acid. pH of 0.1 molar aqueous solution at 25 °C; 4.5.

PHENYL SALICYLATE. [118-55-8] 2-Hydroxybenzoic acid phenyl ester; Salol. $C_{13}H_{10}O_3$; mol wt 214.22, C 72.89%, H 4.71%, O 22.41%. Made by the action of phosphorous oxy-chloride on a mixture of phenol and salicylic acid. Phenyl Salicylate exists as white crystals with a melting point of 41° - 43°C. It is very slightly soluble in water and freely soluble in alcohol.

METHYLENE BLUE. [61-73-4] 3,7-BIS(dimethylamino) phenothiazine-5-ium chloride; C.I. Basic Blue 9; methylthioninium chloride tetramethylthionine chloride; 3,7-bis(dimethylamino) phenazathionium chloride. $C_{16}H_{18}ClN_3S$; mol wt 319.85, C 60.08%, H 5.67%, Cl 11.08%, N 13.14%, S 10.03%. Methylene Blue (Methylthionine chloride) exists as dark green crystals. It is soluble in water and in chloroform; sparingly soluble in alcohol.

HYOSCYAMINE SULFATE. [620-31-1] [3(S)-endo]-α-(Hydroxymethyl)-benzeneacetic acid 8-mehtyl-8-azabicyclo [3.2.1] oct-3-yl ester sulfate (2:1) (salt); 1αH, 5αH-tropan-3α-ol(-)-tropate (ester) sulfate (2:1) (salt); 3α-tropanyl S-(-)-tropate; I-tropic acid ester with tropine; I-tropine tropate. $C_{34}H_{48}N_2O_{10}S$. Hyoscyamine Sulfate is an alkaloid of belladonna. Exists as a white crystalline powder. Its solutions are alkaline to litmus. Affected by light, it is slightly soluble in water freely soluble in alcohol; sparingly soluble in ether.

CLINICAL PHARMACOLOGY

METHENAMINE degrades in an acidic urine environment releasing formaldehyde which provide bactericidal or bacteriostatic action. It is well absorbed from the gastrointestinal tract. 70% to 90% reaches the urine unchanged at which point it is hydrolyzed if the urine is acidic. Within 24 hours it is almost completely (90%) excreted; of this amount at pH 5, approximately 20% is formaldehyde. Protein binding – some formaldehyde is bound to substances in the urine and surrounding tissues. Methenamine is freely distributed to body tissue and fluids but is not clinically significant as it does not hydrolyze at pH greater than 6.8.

SODIUM PHOSPHATE MONOBASIC an acidifier, helps to maintain an acid pH in the urine necessary for the degradation of methenamine.

PHENYL SALICYLATE releases salicylate, a mild analgesic for pain.

METHYLENE BLUE possesses weak antiseptic properties. It is well absorbed by the gastrointestinal tract and is rapidly reduced to leukomethylene blue which is stabilized in some combination form in the urine. 75% is excreted unchanged.

HYOSCYAMINE SULFATE is a parasympatholytic drug which relaxes smooth muscles and this produces an antispasmodic effect. It is well absorbed form the gastrointestinal tract and is rapidly distributed throughout the body tissues. Most is excreted in the urine within 12 hours, 13% to 50% being unchanged. Protein binding for hyoscyamine sulfate is moderate and biotransformation is hepatic.

INDICATIONS AND USAGE

VILEVEV MB is indicated for the treatment of symptoms of irritative voiding. Indicated for the relief of local symptoms, such as inflammation, hypermotility, and pain, which accompany lower urinary tract infections and antispasmodic. Indicated for the relief of urinary tract symptoms caused by diagnostic procedures.

CONTRAINDICATIONS

VILEVEV MB is contraindicated in patients with a hypersensitivity to any of the ingredients. Risk-benefit should be considered when the following medical problems exist: Cardiac disease (especially cardiac arrhythmias, congestive heart failure, coronary heart disease, and mitral stenosis); gastrointestinal tract obstructive disease; glaucoma; myasthenia gravis; acute urinary retention may be precipitated in obstructive uropathy (such as bladder neck obstruction due to prostatic hypertrophy).

WARNINGS

If rapid pulse, dizziness, or blurring of vision occurs, discontinue use immediately.

Patients should be advised that urine will be colored blue when taking this medication. Do not exceed recommended dosage.

PRECAUTIONS

Contains Methylene Blue and should NOT be taken with serotonergic psychiatric medications.

Cross sensitivity and/or related problems

Patients intolerant of other belladonna alkaloids may be intolerant of this medication also. Delay in gastric emptying could complicate the management of gastric ulcers.

Drug Interactions

Although the exact mechanism of this drug interaction is unknown, methylene blue inhibits the action of monoamine oxidase A – an enzyme responsible for breaking down serotonin in the brain. It is believed

that when methylene blue is given to patients taking serotonergic psychiatric medications, high levels of serotonin can build up in the brain, causing toxicity. This is referred to as Serotonin Syndrome. Signs and symptoms of Serotonin Syndrome include mental changes (confusion, hyperactivity, memory problems), muscle twitching, excessive sweating, shivering or shaking, diarrhea, and trouble with coordination and/or fever.

Additional Information for Healthcare Professionals

Methylene blue can interact with serotonergic psychiatric medications and cause serious CNS toxicity.

In emergency situations requiring life-threatening or urgent treatment with methylene blue (as described above), the availability of alternative interventions should be considered and the benefit of methylene blue treatment should be weighed against the risk of serotonin toxicity. If methylene blue must be administered to a patient receiving a serotonergic drug, the serotonergic drug must be immediately stopped, and the patient should be closely monitored for emergent symptoms of CNS toxicity for two weeks (five weeks if fluoxetine [Prozac] was taken), or until 24 hours after the last dose of methylene blue, whichever comes first.

In non-emergency situations when non-urgent treatment with methylene blue is contemplated and planned, the serotonergic psychiatric medication should be stopped to allow its activity in the brain to dissipate. Most serotonergic psychiatric drugs should be stopped at least 2 weeks in advance of methylene blue treatment. Fluoxetine (Prozac), which has a longer half-life compared to similar drugs, should be stopped at least 5 weeks in advance.

Treatment with the serotonergic psychiatric medication may be resumed 24 hours after the last dose of methylene blue.

Serotonergic psychiatric medications should not be started in a patient receiving methylene blue. Wait until 24 hours after the last dose of methylene blue before starting the antidepressant.

Educate your patients to recognize the symptoms of serotonin toxicity or CNS toxicity and advise them to contact a healthcare professional immediately if they experience any symptoms while taking serotonergic psychiatric medications or methylene blue.

As a result of hyoscyamine's effect on gastrointestinal motility and gastric emptying, absorption of other oral medications may be decreased during concurrent use with this combination medications.

Urinary alkalizers and thiazide diuretics

May cause the urine to become alkaline reducing the effectiveness of methenamine by inhibiting its conversion to formaldehyde.

Antimuscarinics

Concurrent use may intensify antimuscarinic effects of Hyoscyamine because of secondary antimuscarinic activities of these medications.

Antacids/antidiarrheals

Concurrent use may reduce absorption of Hyoscyamine resulting in decreased therapeutic effectiveness. Concurrent use with antacids may cause urine to become alkaline reducing the effectiveness of methenamine by inhibiting its conversion to formaldehyde. Doses of these medications should be spaced for 1 hour apart from doses of Hyoscyamine.

Antimyasthenics

Concurrent use with Hyoscyamine may further reduce intestinal motility, therefore, caution is recommended.

Ketoconazole and Hyoscyamine may cause increased gastrointestinal pH. Concurrent administration

with Hyoscyamine may result in marked reduction in the absorption of ketoconazole. Patients should be advised to take this combination at least 2 hours after ketoconazole.

Monoamine oxidase (MAO) inhibitors

Concurrent use with Hyoscyamine may intensify antimuscarinic side effects.

Opioid (narcotic) analgesics may result in increased risk of severe constipation.

Sulfonamides

These drugs may precipitate with formaldehyde in the urine increasing the danger of crystalluria.

Patients should be advised that the urine and/or stools may become blue to blue-green as a result of the excretion of methylene blue.

Pregnancy/Reproduction (FDA Pregnancy Category C)

Hyoscyamine and methenamine cross the placenta. Studies have not been done in either animals or humans. It is not known whether Vilevev MB can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity.

VILEVEV MB should be given to a pregnant woman only if clearly needed.

Nursing Mothers

Methenamine and traces of Hyoscyamine are excreted in breast milk. Caution should be exercised when VILEVEV MB is administered to a nursing mother.

Prolonged Use

There have been no studies to establish the safety of prolonged use in humans. No known long-term animal studies have been performed to evaluate carcinogenic potential.

Pediatric

Infants and young children are especially susceptible to the toxic effect of the belladonna alkaloids.

Geriatric

Use with caution in elderly patients as they may respond to the usual doses of the belladonna alkaloids with excitement, agitation, drowsiness, or confusion.

ADVERSE REACTIONS

Cardiovascular – rapid pulse, flushing

Central Nervous System – blurred vision, dizziness, drowsiness

Respiratory – shortness of breath or troubled breathing

Genitourinary – difficult micturition, acute urinary retention

Gastrointestinal – dry mouth, nausea and vomiting

Serious allergic reactions to this drug are rare. Seek immediate medical attention if you notice symptoms of a serious allergic reaction, including itching, rash, severe dizziness, swelling or trouble breathing.

This medication can cause urine and sometimes stools to turn blue to blue-green. This effect is harmless and will subside after medication is stopped.

Call your doctor or physician for medical advice about side effects. To report SUSPECTED

ADVERSE REACTIONS, contact Vilvet Pharmaceuticals Inc., at 1-888-705-4369 or FDA at 1-800-FDA-1088, www.fda.gov/medwatch.

Drug Abuse and Dependence

A dependence on the use of VILEVEV MB has not been reported and due to the nature of its ingredients, abuse of VILEVEV MB is not expected.

OVERDOSAGE

Emesis or gastric lavage. Slow intravenous administration of physostigmine in doses of 1 to 4 mg (0.5 to 1 mg in children) repeated as needed in one to two hours to reverse severe antimuscarinic symptoms.

Administration of small doses of diazepam to control excitement and seizures. Artificial respiration with oxygen if needed for respiratory depression. Adequate hydration. Symptomatic treatment as necessary.

If overdose is suspected, contact the poison control center at 1-800-222-1222, or your local emergency room immediately.

VILEVEV MB DOSAGE AND ADMINISTRATION

Adults

One tablet orally 4 times per day followed by liberal fluid intake.

Older Children

Dosage must be individualized by physician. Not recommended for use in children up to 6 years of age.

HOW IS VILEVEV MB SUPPLIED

VILEVEV MB tablets for oral administration are supplied in child resistant bottles of 90 tablets. VILEVEV MB tablets are light blue to blue, pentagon shaped, debossed with "VIP100" and plain on the other side, NDC 71186-000-24.

STORAGE

Store in a cool, dry place at controlled room temperature 20° to 25°C (68° to 77°F). Keep container tightly closed. Protect from moisture and direct sunlight.

Dispense in a tight, light-resistant container as defined in the USP/NF with a child resistant closure.

KEEP THIS AND ALL DRUGS OUT OF THE REACH OF CHILDREN.

IN CASE OF ACCIDENTAL OVERDOSE, SEEK PROFESSIONAL ASSISTANCE OR CONTACT A POISON CONTROL CENTER IMMEDIATELY.

Note: Patients should be advised that urine will be colored blue when taking this medication.

Rx only.

Manufactured for:
Vilvet Pharmaceuticals Inc
Chester Springs, PA 19425
Rev /2011

PRINCIPAL DISPLAY PANEL - 90 Tablet Bottle Label

NDC 71186-000-24

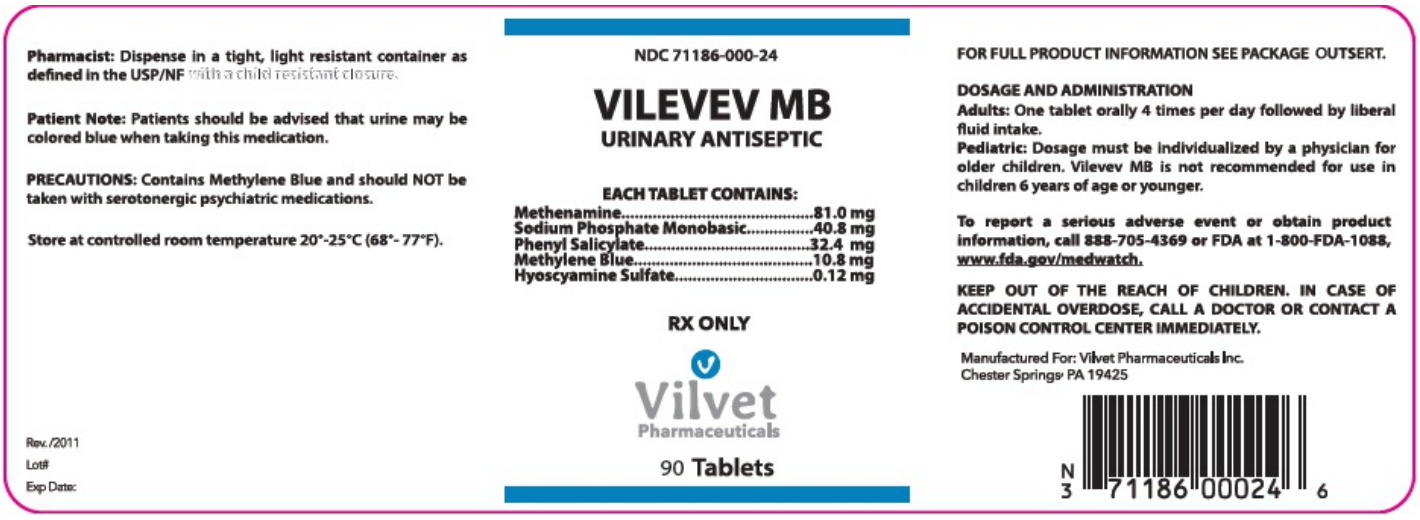
VILEVEV MB
URINARY ANTISEPTIC

EACH TABLET CONTAINS:
Methenamine
81.0 mg
Sodium Phosphate Monobasic
40.8 mg
Phenyl Salicylate
32.4 mg
Methylene Blue
10.8 mg
Hyoscyamine Sulfate
0.12 mg

RX ONLY

Vilvet
Pharmaceuticals

90 **Tablets**



VILEVEV MB

methenamine, phenyl salicylate, sodium phosphate, monobasic, anhydrous, methylene blue anhydrous, and hyoscyamine sulfate tablet

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:71186-000
Route of Administration	ORAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
METHENAMINE (UNII: J50OIX95QV) (METHENAMINE - UNII:J50OIX95QV)	METHENAMINE	81 mg
PHENYL SALICYLATE (UNII: 28A27T47QO) (PHENYL SALICYLATE - UNII:28A27T47QO)		

PHENYL SALICYLATE (UNII: 28A37T47QO) (PHENYL SALICYLATE - UNII:28A37T47QO)	PHENYL SALICYLATE	32.4 mg
SODIUM PHOSPHATE, MONOBASIC, ANHYDROUS (UNII: KH7I04HPUU) (PHOSPHATE ION - UNII:NK08V8K8HR)	SODIUM PHOSPHATE, MONOBASIC, ANHYDROUS	40.8 mg
METHYLENE BLUE ANHYDROUS (UNII: 8NAP7826UB) (METHYLENE BLUE CATION - UNII:ZMZ79891ZH)	METHYLENE BLUE	10.8 mg
HYOSCYAMINE SULFATE (UNII: F2R8V82B84) (HYOSCYAMINE - UNII:PX44XO846X)	HYOSCYAMINE SULFATE	0.12 mg

Product Characteristics

Color	BLUE	**Score**	no score
Shape	PENTAGON (5 SIDED)	**Size**	8mm
Flavor		**Imprint Code**	VIP100
Contains			

Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:71186-000-24	90 in 1 BOTTLE; Type 0: Not a Combination Product	05/01/2011	

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
UNAPPROVED DRUG OTHER		05/01/2011	

Labeler - Vilvet Pharmaceuticals Inc (080444356)

Revised: 2/2019 Vilvet Pharmaceuticals Inc