Lide Laboratories Inc.

Urine Sediment Stain
Concentrated Stain for Urinary Sediment
For In Vitro Diagnostic Use Only

The microscopic examination of urine sediment is generally recognized to be a valuable diagnostic technique. The selective formula originally developed by Sternheimer and Malbin (S-M), stains blood cells, casts and other formed elements in urinary sediment in a distinctive fashion which permits rapid and accurate identification. Lide Laboratories' **HANSEL® Stain** has, for many years, been the stain of choice for the diagnostic evaluation of urine eosinophils. Lide Laboratories' **Urine Sediment Stain** combines the dyes used in the S-M stain and the same solvent and glycerin/water base used in HANSEL Stain. The buffered solvent and base combine to produce an effective vehicle that can carry the stains evenly at a low pH. The formation is considered to be a true solution, precipitates are not expected and filtration is therefore not required.

Directions for Use

1. Collect a freshly voided urine sample in a clean, sealed container. Specimens that cannot be examined immediately should be refrigerated, but not frozen.
2. Mix sample and pour in a centrifuge tube.
3. Centrifuge for 5 minutes at 1500 RPM.
4. Decant the supernatant without disturbing the sediment.
5. Add 2 drops of **Urine Sediment Stain** to the sediment in the tube.
6. Mix the stain and sediment (flick the bottom of the tube with a finger several times).
7. Transfer 1 drop of the stained sediment onto a microscope slide. A cover slip may be used.
8. Examine microscopically using low power for casts and various crystals and high power for RBCs and WBCs. Report elements per field as per standard practices. See also Expected Values

Limits of the Test

Microscopic examination of urinary sediment is a semi-quantitative procedure.

User Quality Control

Quality control procedures as per accredited and applicable local, state and/or federal laboratory standards must be followed. See pertinent NCCLS or CLIA guidelines for appropriate QC practices.

Contains:

Buffered Methanol, Glycerin and Water, Crystal Violet (0.1%), Ammonium Oxalate (0.03%), Safranin O (0.25%)

Expected Values

The chemical and physical properties of various urinary sediments cause the stain to be taken up in varying proportions. Cellular elements including nuclei and cytoplasm also exhibit characteristic staining patterns allowing for differential identification. The chart below summarizes he differential staining characteristics of both Crystal Violet and Safranin O which are generally consistent and well documented for urine sediment.

Common Element	Usual Distinguishing Color of Stained Element		Comments
Red Blood Cells	Pink to purple		
White Blood Cells	Nuclei – Purple	Cytoplasm – Purple Granules	
S-M Positive Cells	Nuclei – Colorless to light blue	Cytoplasm – Pale blue to grey	Glitter Cells may exhibit Brownian motion
Renel Tubular Epithelial Cells	Nuclei - Dark blue-purple	Cytoplasm –Light blue to purple	
Bladder Tubular Epithelial Cells	Nuclei – Blue-purple	Cytoplasm – light purple	
Squamous Epithelial Cells	Dark shade of orange-purple	Light purple or blue	
Hyaline Casts	Pale pink or pale purple		Very uniform color
Coarse Granular Inclusion Casts	Fine dare purple granules in purple matrix		
Fine Granular Inclusion Casts	Fine dark purple granules in pale pink/purple matrix		
Waxy Casts	Pale pink or pale purple even in color		Darker than hyaline casts. Broken ends
Fat Inclusion Casts	Fat globules unstained in a pink matrix		Rare. Confirm with polarized light
Red Inclusion Casts	Pint to orange-red		Intact cells can be seen in matrix
Blood (Hemoglobin) Casts	Orange-red		No intact cells
Bacteria	Motile: don't stain Non-motile: stain blue		Motile organisms are not impaired
Trichomonas	Light blue-green		
Mucous	Pale pink or pale blue		
Background	Pale pink to pale purple		

CAUTIONS: FLAMMABLE liquid and vapor. Store at room temperature.
Avoid excessive heat and flames.
POISON: No not ingest. Avoid contact with skin.

Manufactured by: Lide Laboratories Inc. 401 4th AV SW New Prague, MN 56071
Telephone: 952-758-9760 www.lidelabs.com

Material Safety Data Sheet

IDENTITY *(As Used on Label and List)*
Urine Sediment Stain

The statements contained are offered as information only and are believed to be accurate and represent the best information currently available. However, we make no warranty, expressed or implied, with respect to such information and assume no liability or any type resulting form its use. Users of the product should make their own investigations to determine suitability of the information for their particular purposes.

Section I

Manufacturer's Name: **Lide Laboratories Inc.**	Emergency Telephone Number: 952-758-9760 or contact a local medical facility
Address *(Number, Street, City, State, and ZIP Code)*	Telephone Number for Information: 952-758-9760
401 4th AVE SW	Date Prepared: 04/18/2012
New Prague, MN 56071	Signature of Preparer *(optional)*

Section II - Hazardous Ingredients/Identity Information

95% Methanol (Synonyms: Carbinol; Methyl alcohol; Methyl hydroxide; Monohydroxymethane; Wood alcohol; Wood naptha; Wood spirits; Columbian spirits) CAS RN: 67-56-1 PEL/TLV/TWA: 200 ppm

Other Ingredients 5%: Crystal Violet (Gentian Violet) CAS 548629, Safranin O (Basic Red 2) CAS 477736, Ammonium Oxalate CAS 1113388, Glycerin (Glycerol) CAS 56-81-5, Purified Water

EMERGENCY OVERVIEW

Danger! Flammable liquid and vapor. Poison! Methanol may be fatal or cause blindness if swallowed. Vapor harmful. Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye, skin, and respiratory tract irritation. May cause central nervous system depression. Cannot be made non-poisonous.

Section III - Physical/Chemical Characteristics

Appearance and Odor: Blue in color as Urine Sediment Stain with slight alcoholic odor.

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) 12.2 ° C	Flammable Limits	LEL 6.7	UEL 35

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Water may be ineffective. For large fires, use water spray, fog or alcohol-resistant foam. Do NOT use straight streams of water.

Special Fire Fighting Procedures: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Extinguish all nearby sources of ignition, Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Unusual Fire and Explosion Hazards: Methanol may burn with a flame that is invisible in the daylight. Mixtures of water and as little as 21% methanol are flammable. This includes this product .

Section V - Reactivity Data

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: High temperatures, ignition sources, confined spaces. **Incompatibilities with Other Materials:** Oxidizing agents, reducing agents, acids, alkali metals, potassium, sodium, metals as powders (e.g. hafnium, raney nickel), acid anhydrides, acid chlorides, powdered aluminum, powdered magnesium.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, formaldehyde. **Hazardous Polymerization:** Will not occur.

Section VI - Health Hazard Data

Health Hazards *(Acute and Chronic)*
Danger! Flammable liquid and vapor.
Poison! Methanol may be fatal or cause blindness if swallowed. Vapor harmful. Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye, skin, and respiratory tract irritation. May cause central nervous system depression. Cannot be made non-poisonous.
Emergency and First Aid Procedures
Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
Get immediate medical attention. Stain will stain eyes.
Ingestion: Potential for aspiration if swallowed. **Get medical aid immediately**. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.
Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **Get medical aid**.
Skin: In case of contact, immediately wash skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Urine Sediment Stain will stain skin. Get medical attention if irritation persists after washing.
Notes to Physician: Effects may be delayed. Chronic potential health effects as methanol exist.
Additional toxicological, ecological and regulatory information pertaining to methanol is available upon request.
Antidote: Ethanol may inhibit methanol metabolism.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: Use proper personal protective equipment as indicated in Section VIII. Avoid direct contact with the product. Product will stain the skin. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces.

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. RCRA P-Series: None listed. RCRA U-Series: Methanol CAS# 67-56-1: waste number U154 (Ignitable waste).

Precautions to Be taken in Handling and Storing
Handling: Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Use only with adequate ventilation. Keep away from heat, sparks and flame. Avoid use in confined spaces. Follow good laboratory practices and product use instructions.
Storage: Keep container tightly closed. Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Protect from light.

Transport Information: US DOT Shipping Name - Methanol Solution Hazard Class 3 UN1230 Packing Group II 30 mL shipped as "Small Quantity"

CHEMICAL STORAGE CODES: Storage Color Code RED (Flammable) HEALTH 3 FLAMMABILIITY 3 REACTIVITY 1 PERSONAL PROTECTION 1

Section VIII - Control Measures

Engineering Controls:. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. A fume hood and Class B extinguisher are recommended.
OSHA Vacated PELs: Methanol: 200 ppm TWA; 260 mg/m3 TWA
Personal Protective Equipment Eyes: Wear chemical splash goggles. A face shield may be necessary. **Skin:** Wear butyl rubber gloves, apron, and/or clothing.
Clothing: Wear appropriate protective clothing to prevent skin exposure. **Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Reproduced locally (04/2012) OSHA 174, Sept. 1985 * U.S.G.P.O.: 1986 – 491 – 529/45775