

<b>Lide Laboratories Inc.</b>
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**OTICELL™ Microbiologic Stain**  
**HANSEL® Modified One Minute Technic: *One Stain, One Application***  
**For In-Vitro Diagnostic Use Only**

Since microorganisms are very small and transparent, stains are used to color bacterial cells, yeast and leukocytes to increase their visibility under a microscope. **OTICELL Stain** contains two certified biological stains; Methylene Blue and Eosin Y. Methylene Blue is a positively charged (cationic) dye that combines with negatively charged cellular components such as nucleic acids (DNA and RNA) and acidic polysaccharides. Eosin Y is negatively charged (anionic) and combines with positively charged cellular components, such as proteins and eosinophil granules. Due to the chemical properties of the stains and their cellular reactions, staining can distinguish cell shape (morphology) and differentiate cellular components. This process can facilitate in the identification of microorganisms and the differentiation of cell types that may be present in a microbiologic sample. The dyes in **OTICELL Stain** are dissolved in methanol and added to a glycerin/water base. The “One Minute Technic” requires only one stain and one application. It is a quick, easy and inexpensive diagnostic procedure that provides meaningful results.

**Directions for Use**

1. Apply specimen thinly and evenly onto a clean microscope slide.
2. Dry smears in air, heat slightly or dehydrate with methyl alcohol to assure fixation.
3. Flood slides completely with **OTICELL Stain** and allow to stand for at least 30 seconds. A longer period of time may be necessary for thicker smears. Slides may also be dipped for the same time period.
4. Pour off stain and rinse stain with distilled water to remove excess stain.
5. Drain off and dry in air. Wipe back and edges of slide.
6. Scan slide at low power advancing to 40X objective for evaluation of yeast and white blood cells and then to 100X for bacteria and cellular characterization (oil-immersion and cover slips may be required).

Note: To lighten stain on slide, clear with methyl alcohol then rinse with distilled water and dry.

**Limits of the Test**

Microscopic examination of ear sediment is a semi-quantitative procedure. Results may vary due to technique. See pertinent NCCLS or CLIA guidelines for any required QC procedures for Methylene Blue and Eosin Y containing microbiologic stains for human use.

**Contains (formulation values):**

Methanol, Purified Water, Glycerol, Methylene Blue (0.25%), Eosin Y (0.17%)

**Directions for Veterinary Otic Cytology**

Otic cytology is recognized to be a valuable diagnostic technique. Otic cytology starts by gently taking a specimen from the ear, obtained with a cotton-tipped applicator (swab). Separate swabs are used for opposite ears, as the same process is not always active in both ears at the same time. Each swab should be rolled evenly on a clean microscope slide. Prepare 2 slides/ear if there is enough sample. Complete the staining process as directed above.

The chart below summarizes the morphology and differential staining characteristics of both Methylene Blue and Eosin Y for microorganisms commonly found in veterinary otic samples. The stated information is generally consistent and well documented for the stains used and organisms cited.

Microorganism	Genus/Cell Type	Morphology	Typical Color	Comments
Bacteria	Staphylococcus spp	Cocci	Blue	May cluster, gram positive
	Streptococcus spp	Cocci	Blue	May pair, gram positive
	Corynebacterium	Rod	Blue	Gram positive, dark blue metachromatic granules possible, “Chinese-letter” formation
	Pseudomonas ssp	Rod	Blue	Gram negative, most common as <i>Pseudomonas aeruginosa</i> , one or more polar flagella providing motility, non-spore forming
Yeast	Malassezia	Dark blue spherical to elliptical shaded spores with darkened nucleus. Rounded base with bottle shaded end when budding.		Most common <i>Malassezia pachydermatis</i>
Leukocytes	Neutrophils	Round	Blue, Blue Nucleus	Indicates possible bacterial infection
	Eosinophils	Round	Blue Nucleus, Red Granules in cytoplasm	Indicates possible allergic condition

Use **OTICELL Stain** in conjunction with **OTICELL Quad Plates** containing four culture medias that support and/or inhibit the growth of otic microorganisms. This process provides confirmatory data and allows additional differentiation and identification of microorganism(s).

**CAUTIONS: FLAMMABLE Store at room temperature. Avoid excessive heat and flames. Do not ingest. Avoid contact with skin.**

**Manufactured by: Lide Laboratories Inc. 401 4<sup>th</sup> AV SW New Prague, MN 56071**  
**952-758-9760 [www.lidelabs.com](http://www.lidelabs.com)**

Lide Laboratories' **HANSEL® Stain** is for the cytologic evaluation of secretions.  
**HANSEL is a Federal registered trademark. OTICELL is a Minnesota trademark.**

# Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health

Administration (Non-Mandatory Form) Form

Approved OMB No. 1218-0072



<b>IDENTITY (As Used on Label and List)</b> <b>OTICELL™ Microbiologic Stain</b>		<i>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 from its use. Users of the product should make their own investigations to determine suitability of the information for their particular purposes.</i>	
Section I - Manufacturer's Name: <b>Lide Laboratories Inc.</b>		Emergency Telephone Number: 952-758-9760 or contact a local medical facility	
Address (Number, Street, City, State, and ZIP Code) 401 4 <sup>th</sup> AVE SW New Prague, MN 56071		Telephone Number for Information: 952-758-9760 Date Prepared: 04/18/2012 Signature of Preparer (optional)	
Section II - Hazardous Ingredients/Identity Information			
75% Methanol (Synonyms: Carbinol; Methyl alcohol; Methyl hydroxide; Monohydroxymethane; Wood alcohol; Wood naphtha; Wood spirits; Columbian spirits) CAS RN: 67-56-1 PEL/TLV/TWA: 200 ppm Buffered with Potassium and Sodium Phosphate Monobasic and Dibasic Purified Water, Glycerin (Glycerol) CAS 56-81-5, Methylene Blue CAS 61-73-4, Eosin Y (Acid Red 87) CAS 17372-87-1			
<b>EMERGENCY OVERVIEW</b>			
<b>Danger! Flammable liquid and vapor.</b> 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 OTICELL 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			
<b>Chemical Stability:</b> Stable under normal temperatures and pressures. <b>Conditions to Avoid:</b> High temperatures, ignition sources, confined spaces. <b>Incompatibilities with Other Materials:</b> 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. <b>Hazardous Decomposition Products:</b> Carbon monoxide, carbon dioxide, formaldehyde. <b>Hazardous Polymerization:</b> Will not occur.			
Section VI - Health Hazard Data			
Health Hazards (Acute and Chronic) <b>Danger! Flammable liquid and vapor.</b> 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. <b>Emergency and First Aid Procedures</b> <b>Eyes:</b> In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. <b>Get immediate medical attention.</b> Stain will stain eyes. <b>Ingestion:</b> Potential for aspiration if swallowed. <b>Get medical aid immediately.</b> 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. <b>Inhalation:</b> If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. <b>Get medical aid.</b> <b>Skin:</b> In case of contact, immediately wash skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. OTICELL Stain will stain skin. Get medical attention if irritation persists after washing. <b>Notes to Physician:</b> Effects may be delayed. Chronic potential health effects as methanol exist. Additional toxicological, ecological and regulatory information pertaining to methanol is available upon request. <b>Antidote:</b> 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.			
<b>Transport Information: US DOT Shipping Name - Methanol Solution Hazard Class 3 UN1230 Packing Group II 30 mL shipped as "Small Quantity"</b>			
<b>CHEMICAL STORAGE CODES: Storage Color Code RED (Flammable) HEALTH 3 FLAMMABILITY 3 REACTIVITY 1 PERSONAL PROTECTION 1</b>			
Section VIII - Control Measures			
<b>Engineering Controls:</b> 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. <b>OSHA Vacated PELs:</b> Methanol: 200 ppm TWA; 260 mg/m3 TWA <b>Personal Protective Equipment Eyes:</b> Wear chemical splash goggles. A face shield may be necessary. <b>Skin:</b> Wear butyl rubber gloves, apron, and/or clothing. <b>Clothing:</b> Wear appropriate protective clothing to prevent skin exposure. <b>Respirators:</b> 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	