SAFETY DATA SHEET

1 IDENTIFICATION

GHS Product Identifier

VetScan HemaClean Kit, 6 Tubes (3 ml each totaling 18 ml liquid volume per package)

Other means of identification

Abaxis PN: 790-1513

Recommended use of the chemical and restriction on use

A cleaning agent for use with the Abaxis HM5 VetScan analyzer.

Product Usage Information: VetScan HemaClean is provided in capped tubes of 3 milliliters of total liquid volume. As the amount of chemical is very small, the risk is substantially reduced. We have indicated the same in the shaded sections of this document.

Supplier's details

Company Information: Abaxis, Inc. 3240 Whipple Road Union City, CA 94587, USA Tel: +1-510-675-6500 Fax: +1-510-441-6150

ABAXIS Europe GmbH Bunsenstr. 9-11 64347 Griesheim, Germany Tel: +49 6155 780 21 0 (EU) Fax: +49 6155 780 21 111

Customer Support: +1-800-822-2947 (US), abaxis@abaxis.com Tel: +49 6155 780 21 0 (EU) abaxis@abaxis.de

Emergency phone number +1-800-822-2947 (US) +49 6155 780 21 0 (EU)

This number is available only during business hours (9:00am to 5:00pm UTC)

2 HAZARD(S) IDENTIFICATION

<table>
<thead>
<tr>
<th>RISKS ASSOCIATED WITH CHEMICAL COMPOUND</th>
<th>ASSOCIATED RISKS AT THIS VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification of the substance or mixture: liquid mixture, active chlorine &lt;10%</td>
<td>Classification of the substance or mixture: liquid mixture, active chlorine &lt;10%</td>
</tr>
</tbody>
</table>
3  COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Description</th>
<th>CAS Number</th>
<th>EINECS Number</th>
<th>%</th>
<th>Note at provided volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Hypochlorite</td>
<td>7681-52-9</td>
<td></td>
<td>0–9.00</td>
<td>Skin corrosion (Category 1B), H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Serious eye damage (Category 1), H318</td>
</tr>
<tr>
<td>Other non-hazardous</td>
<td></td>
<td></td>
<td>0–91.00</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ingredients</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 4 FIRST-AID MEASURES

### RISKS ASSOCIATED WITH CHEMICAL COMPOUND

**Inhalation**
Can release corrosive chlorine gas. Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure. Seek immediate medical attention.

**Skin Contact / Absorption**
Immediately flush with lukewarm, gently flowing water for at least 30 minutes. Under running water, remove contaminated clothing, shoes and leather goods. Seek immediate medical attention. Completely decontaminate clothing, shoes and leather goods before reuse, or discard.

**Eye Contact**
Immediately flush eye(s) with lukewarm, gently flowing water for 30 minutes while forcibly holding the eyelids open to ensure complete irrigation of the eye tissue. If a contact lens is present, remove only if easy to do so. Seek immediate medical attention.

**Ingestion**
NEVER give anything by mouth if victim is rapidly losing consciousness, is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 240 to 300 mL (8 to 10 oz.) of water to dilute material in stomach. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Rinse mouth and repeat administration of water. Quickly transport victim to an emergency care facility.

### ASSOCIATED RISKS AT THIS VOLUME

**Inhalation**
Move to fresh air. If breathing is affected, seek medical attention.

**Skin Contact/Absorption**
Immediately flush with lukewarm, gently flowing water for at least 15 minutes. Seek medical or first aid attention.

**Eye Contact**
Immediately flush eye(s) with lukewarm, gently flowing water for 30 minutes while forcibly holding the eyelids open to ensure complete irrigation of the eye tissue. If a contact lens is present, remove only if easy to do so. Seek immediate medical attention.

**Ingestion**
Rinse mouth thoroughly with water. Do NOT induce vomiting. Drink 240 to 300 mL (8 to 10 oz.) of water. Repeat rinse and drinking of water. Seek immediate medical attention.

### Additional Information
Provide general supportive measures (comfort, warmth, rest). Consult a doctor and/or the nearest Poison Control Center for all exposures except minor instances of inhalation or skin contact.

### Most important symptoms/effects, acute and delayed
When ingested or inhaled, nausea and vomiting, these symptoms may be delayed. When in contact with skin or eyes; acute pain and burns or blisters will occur.

### 5 FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Sodium hypochlorite solutions do not burn. Extinguish fire using extinguishing agents suitable for the surrounding fire and not contraindicated for use with sodium hypochlorite. Cool exposed containers with water.

**Unsuitable Extinguishing Media**

DO NOT use dry chemical fire extinguishing agents containing ammonium compounds (such as some A:B:C agents), since an explosive compound can be formed.

**Specific hazards arising from the chemical**

Sodium hypochlorite decomposes when heated, giving off corrosive chlorine and hydrogen chloride. Solutions decompose when exposed to sunlight, giving off oxygen gas. However, the amount of oxygen produced is not sufficient to cause combustion. Explosive decomposition may occur under fire conditions and closed containers may rupture violently due to a rapid decomposition, if exposed to fire or excessive heat for a sufficient period of time.

**Special protective actions for fire-fighters**

Wear NIOSH-approved self-contained breathing apparatus and protective clothing. The decomposition products of sodium hypochlorite, such as chlorine and hydrogen chloride are extremely hazardous to health. Do not enter without wearing specialized protective equipment suitable for the situation. Firefighter's normal protective equipment. (Bunker Gear) will not provide adequate protection.

### 6 ACCIDENTAL RELEASE MEASURES

**RISKS ASSOCIATED WITH CHEMICAL COMPOUND**

**Personal Precautions**

Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so.

**Environmental Precautions**

Prevent material from entering sewers or confined spaces. Notify local health and wildlife officials. Notify operators of nearby water intakes.

**Methods for Containment and Clean Up**

SMALL SPILLS: Clean up spill with non-reactive absorbent and place in suitable, covered, labelled containers. Flush area with water. Contaminated absorbent material may pose the same hazards as the spilled product. Small spills of sodium hypochlorite solutions can be broken down by covering it with a reducing agent such as sodium thiosulfate, sodium meta-bisulfite, or a ferrous salt.

**ASSOCIATED RISKS AT THIS VOLUME**

**Personal Precautions**

Wear appropriate personal protective equipment.

**Environmental Precautions**

None required

**Methods for Containment and Clean Up**

Flush area with water.
| With the sulfite or ferrous salt, add some dilute (2 M) sulfuric acid to speed up the reaction. Transfer the mixture into large containers of water and neutralize with soda ash (sodium carbonate).

LARGE SPILLS: Contact fire and emergency services and supplier for advice. |
### 7 HANDLING AND STORAGE

<table>
<thead>
<tr>
<th>RISKS ASSOCIATED WITH CHEMICAL COMPOUND</th>
<th>ASSOCIATED RISKS AT THIS VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Precautions for safe handling</strong></td>
<td><strong>Precautions for safe handling</strong></td>
</tr>
<tr>
<td>This material is a CORROSIVE liquid. Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Avoid generating mists. Prevent the release of mists into the workplace air. Inspect containers for damage or leaks before handling. Label containers. Never add water to a corrosive. Always add corrosives to water. When mixing with water, stir small amounts in slowly. Use cold water to prevent excessive heat generation. Never return contaminated material to its original container. Have suitable emergency equipment for fires, spills and leaks readily available.</td>
<td>This material is a CORROSIVE liquid. Wash thoroughly after handling.</td>
</tr>
<tr>
<td><strong>Conditions for safe storage, including any incompatibilities</strong></td>
<td><strong>Conditions for safe storage, including any incompatibilities</strong></td>
</tr>
<tr>
<td>Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Keep containers tightly closed when not in use and when empty.</td>
<td>Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Keep containers tightly closed when not in use and when empty.</td>
</tr>
<tr>
<td>Incompatibilities</td>
<td>Incompatibilities</td>
</tr>
<tr>
<td>Primary amines, aromatic amines, ammonium salts, phenylacetonitril, ammonia, urea, phenylacetonitrile, acids, metals, reducing agents, ethyleneimine, methanol, formic acid, furfuraldehyde, ethandiol, sodium ethylenedioaminetetracetate solution, sodium hydroxide solution.</td>
<td>Primary amines, aromatic amines, ammonium salts, phenylacetonitril, ammonia, urea, phenylacetonitrile, acids, metals, reducing agents, ethyleneimine, methanol, formic acid, furfuraldehyde, ethandiol, sodium ethylenedioaminetetracetate solution, sodium hydroxide solution.</td>
</tr>
</tbody>
</table>
### Exposures Controls/Personal Protection

#### Control Parameters

<table>
<thead>
<tr>
<th>Exposures Limit(s)</th>
<th>Component Regulation Type of Listing Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite</td>
<td>AIHA WEEL-STEEL 2mg/m³ (15 min)</td>
</tr>
<tr>
<td>Chlorine</td>
<td>ACGIH TLV-TWA 0.5 ppm</td>
</tr>
</tbody>
</table>

#### Appropriate Engineering Controls

**Ventilation Requirements**

- Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements.
- Supply sufficient replacement air to make up for air removed by exhaust systems.

#### Individual Protection Measures

**Personal Protective Equipment**

- **Eyes/Face**: Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should never be worn; they may contribute to severe eye injury.
- **Hand Protection**: Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
- **Skin and Body Protection**: Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.

### Physical and Chemical Properties

**Physical and chemical properties**

- **Physical State**: Liquid
- **Color**: Clear, greenish-yellow solution.
Odor: Strong chlorine odor
Odor Threshold: Not Available

Properties

pH: 11-13

Melting Point/Freezing Point: -15°C (12% solution)

Initial Boiling Point and Boiling Range: Slowly decomposes above 40°C

Flash Point: Not Applicable

Evaporation Rate: Not available;

Flammability: Non-Flammable

Upper Flammable Limit: Not Applicable

Lower Flammable Limit: Not Applicable

Vapor Pressure (mm Hg, 20°C): Does not form a vapor

Vapor Density (Air=1): Not Available

Relative Density: Not Available

Solubility(ies): Completely soluble in water

Partition Coefficient: n-octanol/water

Log POW: -3.42 (estimated)

Auto-ignition Temperature: Not Applicable

Decomposition Temperature: Slowly decomposes above 40°C

Viscosity: Not Available

Explosive Properties: Pressure buildup in containers could result in an explosion when heated or in contact with acidic fumes. Vigorous reaction with oxidizable organic materials may result in a fire.

Specific Gravity (Water=1): 1.1-1.2

% Volatiles by Volume: Not Available

Formula: NaOCl

Molecular Weight: 74.44 g/mol

10 STABILITY AND REACTIVITY

Reactivity

Sodium hypochlorite solution gives off oxygen when heated or when exposed to sunlight. However, the amount is small and will not cause or contribute to combustion. The solutions are, therefore, not considered to be oxidizing agents.

Chemical Stability:
Sodium hypochlorite solutions decompose slowly at normal temperatures releasing low concentrations of corrosive chlorine gas.

**Possibility of hazardous reactions**

Hazardous polymerization will not occur.

**Thermal Decomposition:** Will decompose when burned

**Conditions to avoid**

Heat, sunlight, acidic conditions, the presence of metals and other impurities.

Primary amines, aromatic amines, ammonium salts, phenylacetonitril, ammonia, urea, phenylacetonitrile, acids, metals, reducing agents, ethyleneimine, methanol, formic acid, furfuraldehyde, ethandiol, sodium ethylenediaminetetraacetate solution, sodium hydroxide solution.

**Incompatible materials**

Chlorine, sodium chlorate.

### 11 TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>RISKS ASSOCIATED WITH CHEMICAL COMPOUND</th>
<th>ASSOCIATED RISKS AT THIS VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toxicological (health) effects</strong></td>
<td><strong>Toxicological (health) effects</strong></td>
</tr>
<tr>
<td><strong>Acute Toxicity</strong></td>
<td><strong>Acute Toxicity – N/A</strong></td>
</tr>
<tr>
<td><strong>Component Oral LD$<em>{50}$ Dermal LD$</em>{50}$ Inhalation LC$_{50}$</strong></td>
<td><strong>Chronic Toxicity – Carcinogenicity</strong></td>
</tr>
<tr>
<td>Sodium Hypochlorite (20%) 44.5 g/kg (rat) &gt; 50 g/kg (rabbit) &gt; 26.25 g/m$^3$ (rat, 4hr)</td>
<td><strong>Component IARC</strong></td>
</tr>
<tr>
<td><strong>Sodium Hypochlorite Group 3: Not classifiable as to its carcinogenicity to humans. [hypochlorite salts]</strong></td>
<td><strong>Symptoms related to the physical, chemical and toxicological characteristics</strong></td>
</tr>
<tr>
<td><strong>Skin Corrosion/Irritation</strong></td>
<td><strong>Skin Corrosion/Irritation</strong></td>
</tr>
<tr>
<td>Very dilute solutions have caused negligible irritation, while more concentrated solutions have caused acute corrosive injury to skin. Prolonged exposure may lead to permanent scarring of skin.</td>
<td><strong>Serious Eye Damage/Irritation</strong></td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td><strong>Serious Eye Damage/Irritation</strong></td>
</tr>
<tr>
<td>Acute exposure may lead to burning of the mouth and throat, abdominal cramps, nausea, vomiting, diarrhea, shock. May lead to convulsions, coma, and even death.</td>
<td><strong>Respiratory or Skin Sensitization</strong></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td><strong>Respiratory or Skin Sensitization</strong></td>
</tr>
<tr>
<td>Irritant of the nose and throat, causing coughing, difficulty breathing, and pulmonary edema.</td>
<td><strong>Serious Eye Damage/Irritation</strong></td>
</tr>
<tr>
<td><strong>Indications</strong></td>
<td><strong>Respiratory or Skin Sensitization</strong></td>
</tr>
<tr>
<td>Very dilute solutions have caused negligible irritation</td>
<td><strong>Negative results (0/20 guinea pigs sensitized) have been obtained for 8% sodium hypochlorite solution in a skin sensitization test.</strong></td>
</tr>
</tbody>
</table>
Very dilute solutions have caused no irritation. Acute exposure of more concentrated solutions have caused corrosive injury, which did not heal within 21 days.

**Respiratory or Skin Sensitization**

Negative results (0/20 guinea pigs sensitized) have been obtained for 8% sodium hypochlorite solution in a skin sensitization test. Insufficient details are available to evaluate a report of a positive result (positive reactions in 2/10 animals) obtained using 6% sodium hypochlorite (pH 11.2) with the guinea pig ear swelling test for non-immunological contact urticaria.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Germ Cell Mutagenicity**
The available information does not suggest that sodium hypochlorite is mutagenic.

**Reproductive Toxicity**
There is insufficient information available to draw conclusions.

**STOT-Single Exposure** May cause respiratory irritation.

**STOT-Repeated Exposure** Not Available

**Aspiration Hazard** Prolonged or repeated overexposure causes lung damage.

**Synergistic Materials** Not Available

### 12 ECOLOGICAL INFORMATION

#### TOXICITY

**Toxicity to Algae**
EC$_{50}$(Red algae, 96hr): 46mg/L

**Toxicity to Fish**
LC$_{50}$(Salmo gairdneri, 48hr): 0.07mg/L

**Toxicity to Daphnia and Other Aquatic Invertebrates**
LC$_{50}$(Daphnia magna, 48hr): 0.032mg/L

#### PERSISTENCE AND DEGRADABILITY

Not Available

#### BIO-ACCUMULATIVE POTENTIAL

No evidence to support any rating.
MOBILITY IN SOIL
Not Available

OTHER ADVERSE EFFECTS
Not Available

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Waste Treatment Methods: Check regional waste requirements

Waste Treatment Options: Treatment options approved by local authorities

Sewage Disposal Options: Check with local authorities before discharge to the sewer

Other Disposal Recommendations: Dispose of according to local, state, and national regulatory requirements.

U.S. Waste Classification: Non-RCRA Waste

California Waste Codes: N/A

14 TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>RISKS ASSOCIATED WITH CHEMICAL COMPOUND</th>
<th>ASSOCIATED RISKS AT THIS VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT: GROUND.</td>
<td>DOT: Not restricted.</td>
</tr>
<tr>
<td>TDG:</td>
<td>TDG: No restrictions for road or rail</td>
</tr>
<tr>
<td>UN Number: UN 3082</td>
<td>ICAO: Not restricted per Special Provision A197 – “These substances when transported in single or combination packages containing a net quantity or having a net mass of 5 L or less for liquids . . . are not subject to any other provisions of these Regulations providing the packaging meets the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.”</td>
</tr>
<tr>
<td>Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</td>
<td></td>
</tr>
<tr>
<td>Hazard Class: 9</td>
<td></td>
</tr>
<tr>
<td>Packaging Group: III</td>
<td></td>
</tr>
<tr>
<td>Description: UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SODIUM HYPOCHLORITE), 9, III, MARINE POLLUTANT</td>
<td></td>
</tr>
<tr>
<td>ICAO:</td>
<td></td>
</tr>
<tr>
<td>UN Number: UN 3082</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>IATA:</td>
<td></td>
</tr>
</tbody>
</table>

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15 REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Rhode Island</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite 7081-52-9</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sodium chlorate 7775-09-9</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**EU Regulations:** This material safety data sheet conforms to Regulation (EC) No 1272/2008, 1907/2006, and other requirements established by the European Union

**National Regulations: Germany:** Water Hazard Class I

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been completed for this product

**Canada** WHMIS Hazard Class E - Corrosive material

### 16 OTHER INFORMATION

**HMIS Rating**
- Health Hazard: 3
- Flammability: 0
- Physical Hazard: 0
- Personal Protection: B

**NFPA Rating**
- Health hazard: 3
- Fire Hazard: 0
- Reactivity Hazard: 0

**Full text of H-Statements referred to under sections 2 and 3.**

- Eye Dam. Serious eye damage
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- Skin Corr. Skin corrosion

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Abaxis shall not be held liable for any damage resulting from handling or from contact with the above product.

Date of Preparation: July 16, 2018