PSDS Vesicular Stomatitis Virus

PATHOGEN SAFETY DATA SHEET

CHARACTERISTICS

Synonym or Cross Reference	Vesiculovirus, Vesicular stomatitis, VS, VSV, Vesicular stomatitis virus disease, Vesicular stomatitis fever, and Indiana fever
Disease	Flu-like respiratory infection.
Morphology	Vesicular stomatitis virus (VSV) is a bullet-shaped RNA virus mostly found in the Western Hemisphere. It has two main serotypes: VSV serotype Indiana and VSV serotype New Jersey.
Zoonosis	Yes, through direct contact with infected animals or through the bite of an infected sand fly.

RISK GROUP & CONTAINMENT REQUIREMENTS

ABSL-2	For all procedures utilizing infected animals.
BSL-2/BSL-2+	For all procedures involving suspected or known infectious specimen or cultures, work in a BSC unless otherwise approved and stated in lab-specific manual.
Risk Group 2	Agents that are associated with human disease which is rarely serious and for which preventive or therapeutic interventions are often available.

LABORATORY HAZARDS

Primary Hazards	Exposure of skin and mucous membranes to VSV by direct contact or bite by an infected sand fly. Also, handling infected livestock.
Sources	Other samples described in IBC protocol.
Lab Acquired Infections (LAIs)	59 cases due to different viral strains.

PERSONAL PROTECTIVE EQUIPMENT

Additional Precautions	Additional PPE may be required depending on lab-specific SOPs and IBC Protocol.
Minimum PPE Requirements	Lab coat, disposable gloves, safety glasses, closed toed shoes, long pants.

SPILL PROCEDURES

Large	Immediately notify all lab personnel and clear the area. Remove any contaminated PPE/clothing before exiting the lab. Lock all entry doors, post warning signage, and deny entry. Call DPS (213-740-4321) and ask to notify EH&S. Inform the PI and/or Lab Manager/Supervisor as soon as possible.
Small	Notify all lab personnel lab. Remove contaminated PPE and don new PPE. Cover spill area with absorbent material and add fresh 1:10 bleach:water. Allow 20 minutes (or as directed) contact time. After 20 minutes, clean up and dispose of materials.

VIABILITY

Disinfection	Use 10 % dilution of household bleach (minimum 0.3% sodium hypochlorite) for 20 to 30 minutes, or an acceptable time approved by IBC and EH&S.

VIABILITY

Survival Outside Host	Can survive for 3 to 4 days in infected saliva on milking pails, mangers, and hay.

HEALTH HAZARDS

Host Range	Humans, horses, cattle, pigs, mules, sand flies, grasshoppers, and rodents.
Incubation Period	30 hours to 6 days.
Infectious Dose	Unknown
Modes of Transmission	Bite of an infected sand fly, by direct contact with abrasions on the skin, by contact with infected domestic animals, or by inhaling aerosols via the nasopharyngeal route.
Signs and Symptoms	High fever leading to flu-like symptoms including severe malaise, headaches, myalgia, arthralgia, retrosternal pain, eye aches, and nausea. Primarily affects horses, cattle, and other animals. but can infect humans as well.

EXPOSURE PROCEDURES

Medical Follow-up	Visit USC's designated healthcare provider. Bring a copy of this PSDS.
Mucous Membrane	Flush eyes for 5-10 minutes at eyewash station.
Other Exposures	Immediately wash affected area with soap and water for 15 minutes.
Reporting	Immediately report incident to supervisor, notify EH&S, and complete Manager's Report.

MEDICAL PRECAUTIONS/TREATMENT

Prophylaxis	None available
Surveillance	Monitor for symptoms of infection.
Treatment	No specific therapy is currently available.
USC Requirements	Immediately report any exposures to Environmental Health & Safety.
Vaccines	None available

REFERENCES

BMBL
http://tiny.cc/cdc-bmbl

Canadian PSDS
http://tiny.cc/canada-gov-psds

CDC
https://www.cdc.gov/

NIH Guidelines
http://tiny.cc/nih-bio-secure

Virginia Tech
http://tiny.cc/vt-psds

Montana State University
http://tiny.cc/msu-psds