MATERIAL SAFETY DATA SHEET - INFECTIOUS SUBSTANCES

SECTION I: INFECTIOUS AGENT

Name: Marek's disease herpesvirus (MDV), serotype 1.
Synonym or cross reference: Gallid herpesvirus 2.
Characteristics: Family herpesviridae, subfamily alphaherpesvirinae, genus Mardivirus
Enveloped virion size is approximately 160 nm. Genome double-stranded DNA of
approximately 180 kb. Virus replicates in lymphocytes and epithelial cells in vivo. Cell
cultured virus or virus in MDV-transformed lymphoblastoid cells is strictly cell-
associated. Destruction of infected cells destroys the infectivity. **ONLY CELL-
ASSOCIATED MDV WILL BE SHIPPED BY DR. SCHAT'S GROUP.**

SECTION II – HEALTH HAZARD

Pathogenicity: Infects chickens, can infect degree turkeys and Japanese quail. Infection
causes destruction of lymphocytes with subsequent immunosuppression. Under certain
conditions, MDV will cause lymphomas in chickens, turkeys and Japanese quail. **Not
infectious to humans.**

Epidemiology: MDV has a world-wide distribution.

Host range: Gallinaceous birds (chickens, turkeys, Japanese quail)

Infectious dose: Theoretically, 1 plaque forming unit can establish infection in
susceptible chickens

Mode of transmission: Cell-free MDV is produced in feather follicle epithelium (FFE), as
a consequence feather dust and dander can be infectious.

Incubation period: 3 to 4 days for virus replication in lymphoid organs, 12 to 16 days for
virus spread through FFE, and >3 weeks for tumor development in chickens.

SECTION III – DISSEMINATION

Reservoir: Chickens
Zoonosis: None
Vectors: None
SECTION IV - VIABILITY

Drug susceptibility: N/A
Susceptibility to disinfectants: Cell-associated MDV is susceptible to many disinfectants 10 minutes in 1% hypochlorite is recommended.

Physical inactivation: Cell-associated virus: 30 minutes at 56°C. Cell-free virus: 10 minutes 1% hypochlorite, 30 minutes at 56°C.

Survival outside the host: Cell-associated virus depends on viability of the cells. Cell-free virus from FFE bound to cellular debris: 4 to 8 months at room temperature.

SECTION V - MEDICAL

NA, not infectious for humans.
SECTION VI - LABORATORY HAZARDS
Laboratory-acquired infections: Human laboratory infections have not been reported.

SECTION VII - RECOMMENDED PRECAUTIONS

Containment requirements: Cell-associated virus: biosafety level 1 would be satisfactory, but level 2 will be needed to prevent bacterial contamination of cell cultures.
Protective clothing: Laboratory coat is recommended
Other precautions: None

SECTION VIII - HANDLING INFORMATION

Spills: Cell-associated virus: cover with 1% hypochlorite or 70% alcohol and clean up with paper towels.
Disposal: Cell-associated virus: add 1% hypochlorite to virus-infected cell suspension or autoclave.
Storage: In cryogenic vials in liquid nitrogen (preferred for long-term storage) or -80°C for up to 1 month.

SECTION IX - MISCELLANEOUS INFORMATION

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Prepared by: K.A. Schat, Professor of Avian Virology