MATERIAL SAFETY DATA SHEET – Infectious substance, Category B

SECTION I: Biological Substance - Category B

Name: Chicken rotavirus strain Ch-2
Synonym or cross reference: none
Characteristics: Family Reoviridae, Genus Rotavirus, subgroup A. Virion size approximately 75 nm with double-shelled capsid. Genome 11 segment of double stranded RNA. Virus replicates in intestinal epithelial cells in vivo. Chick kidney cells are the preferred substrate for in vitro propagation, but requires treatment with trypsin.

SECTION II – HEALTH HAZARD

Pathogenicity: The Ch-2 strain infects chickens and turkeys, it is unknown if it infects other bird species. Infection in young chickens is subclinical, infection of chickens older than 6 weeks may result in diarrhea for a few days and birds recover, mortality is normally not associated with infection. Avian rotaviruses are not infectious to humans.

Epidemiology: Avian rotaviruses have a world-wide distribution in commercial poultry operations.

Host range: Chickens, turkeys, other bird species?

Infectious dose: The minimal infectious dose has not been established, experimental research in my laboratory used $10^4$ to $10^5$ tissue culture infectious does-50% of Ch-2 to infect 8-week-old chickens (Work done in the 1980’s).

Mode of transmission: fecal-oral route

Incubation period: 12 to 24 hours

SECTION III – DISSEMINATION

Reservoir: Chickens, turkeys
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: heat-treatment for 30 minutes at 56° C reduces titer >100-fold. There is little to no published information on disinfectants for avian rotaviruses (Diseases of Poultry, 11th edition, 2003).

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: Biosafety level 1 will be satisfactory, but level 2 will be needed to prevent bacterial contamination if the virus is propagated in cell cultures.
Protective clothing: Laboratory coat is recommended
Other precautions: None

SECTION VIII – HANDLING INFORMATION

Spills: cover with 5% hypochlorite or 70% alcohol and clean up with paper towels.
Disposal: autoclave.
Storage: Stable at -20 C

SECTION IX – MISCELLANEOUS INFORMATION

Date prepared: January 21, 2008

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