

**United States Department of Agriculture  
Animal and Plant Health Inspection Service  
Center for Veterinary Biologics  
P. O. Box 844  
Ames, IA 50010**

1. **Reagent Name:** *Clostridium perfringens* Type A (alpha) Antitoxin
2. **Strain or Source:** Not applicable.
3. **Lot Number:** IRP 538 (06)
4. **Fill Date:** February 16, 2006
5. **Expiration Date:** No expiration date has been assigned to this product because *C. perfringens* type A (alpha) antitoxin has demonstrated over time to be very stable if properly stored. The stability of this reagent will be routinely monitored by the Center for Veterinary Biologics.

**Precautions:** There are no known hazards associated with the use of this reagent.

6. **Intended Use:** IRP 538 (06) serves as the standard antitoxin when conducting *C. perfringens* type A (alpha) toxin-neutralization (TN) tests in mice.
7. **Instructions for Use:** IRP 538 (06) contains 6.0 International units of alpha antitoxin per mL. A dilution of standard antitoxin containing 1.0 antitoxin unit per mL (AU/mL) is used in the mouse assay. The dilution is prepared by adding 1.0 mL of IRP 538 (06) to 5.0 mL of peptone diluent (1.0% peptone, 0.25% sodium chloride, pH 7.2).
8. **Test of Reagent:**

*Determination of antitoxin titer* - The antitoxin titer of IRP 538 (06) was determined by injecting mice intravenously with 0.5 mL volumes of diluted antitoxin mixed with 1.0 L<sub>o</sub> dose of toxin (the largest amount of toxin which, when mixed with 1.0 unit of antitoxin, causes no deaths in animals within 48 hours), and 1.0 L<sub>+</sub> dose of toxin (the smallest amount of toxin which, when mixed with 1.0 unit of antitoxin causes death in at least 80% of the mice within 48 hours). The antitoxin titer of IRP 538 (06) was confirmed by comparing the results of mice injected with toxin-antitoxin mixtures containing 1.0 mL of IRP 538 (06) possessing 1.0 AU/mL with the results of mice injected with toxin-antitoxin mixtures containing 1.0 mL of International *C. perfringens* alpha antitoxin possessing 1.0 AU/mL.

*Sterility test* - The toxin was tested for sterility and found to be free of viable bacteria and fungi according to procedures outlined in 9 CFR 113.26.

**9. Container Size, Type, Weight, or Volume.** 2-mL glass vials containing 1.3 mL of antitoxin

**10. Storage Conditions:** Store at -70°C or lower.

**11. CVB Technical Contact:** Bacteriology Section, Center for Veterinary Biologics, (515) 337-6140 or FAX (515) 337-7673.

**12. Origin and Passage History:** *Clostridium perfringens* Type A (alpha) Antitoxin IRP 538 (06) was obtained from young adult goats immunized with antigen prepared from *C. perfringens* type A American Type Culture Collection (ATCC) no.13124.

**13. Method of Preparation:** Goats with no history of Clostridial vaccinations received multiple injections of *C. perfringens* alpha toxoid and toxin during a 6-month period. Sera from the hyperimmunized goats were fractionated with ammonium sulfate and the immunoglobulin dialyzed against 0.015 M phosphate buffered saline, pH 7.4. The dialyzed material was passed through a sterile Millipore filtration unit containing a 0.22-µm membrane. No preservative was added to the product.

**14. Other:** None.

Reagent orders and feedback should be sent *including phone number* to the following email address: [CVB@aphis.usda.gov](mailto:CVB@aphis.usda.gov)

Reagent orders forms (APHIS 2018) are available from:  
[http://www.aphis.usda.gov/animalhealth/cvb\\_forms](http://www.aphis.usda.gov/animalhealth/cvb_forms)

**REVISED:** 18Apr14 alb