Product Catalog
2006
Continuing its long and distinguished history of manufacturing quality and effective biologicals, Colorado Serum Company created a subsidiary in 1957 - named **Professional Biological Company** - with the purpose of servicing the growing needs and demands of licensed veterinarians.

Colorado Serum Company started in the early 1900’s when Hog Cholera disease was decimating the swine industry in the United States.

Dr. J.N. Huff, a graduate of the Kansas City Veterinary College, moved to Denver, CO in 1922 to open a satellite manufacturing plant to the original “American Serum Company” founded in Sioux City, IA. Denver’s high altitude provided hogs with enriched blood, so Colorado was considered an ideal environment for producing a new antiserum for Hog Cholera. In 1923, the small Denver plant began production and shortly thereafter separated from American Serum to become Colorado Serum Company. Hog Cholera was eventually eradicated from the United States.

Colorado Serum Company went on to expand its product lines to include a full range of large animal biologicals, large animal veterinary instruments, veterinary diagnostics, specialty products, and laboratory reagents. The facilities now cover 22 acres in Denver and contain all manufacturing as well as administrative offices. Products are marketed and distributed by numerous animal health companies across the globe.

Colorado Serum Company is proud to be a 4th generation family-owned company, on the cutting edge of modern science while continuing the valuable and time honored traditions of personal and responsive service.

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### Colorado Serum Company Milestones

- **1923**: Dr. Joseph Huff establishes **Colorado Serum Company**
- **1940’s**: First to introduce **Crystal Violet Hog Cholera Vaccine**
- **1950’s**: Created **Professional Biological Company** as a subsidiary
- **1960’s**: First to combine respiratory cattle vaccines
- **1970’s**: Introduce livestock **Anthrax Spore Vaccine**
- **1980’s**: Only remaining manufacturer in the US today
- **1990’s**: Added and relocated **Western Instrument Company**

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www.professionalbiological.com
First company licensed for Lepto-5
1970’s

Introduced the first concentrated & purified West Nile Virus Antibody
1980’s & 90’s

Introduced Brucella Abortus RB-51 vaccine
2004

Only manufacturer of Ovine Chlamydia vaccine in the US

Today

Continuing research & development for emerging diseases and product improvement

<table>
<thead>
<tr>
<th>Product for animal use only</th>
<th>Horse</th>
<th>Cattle</th>
<th>Swine</th>
<th>Goats</th>
<th>Sheep</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brucella Abortus Vaccine – Strain RB-51</td>
<td></td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
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<tr>
<td>Cl. Perfringens Types C&amp;D Antitoxin, Equine Origin</td>
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<td>C</td>
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<td>G</td>
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<td>Cl. Perfringens Types C&amp;D Toxoid</td>
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<td>C</td>
<td>Sw</td>
<td>G</td>
<td>Sh</td>
<td>2</td>
</tr>
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<td>Cl. Perfringens Types C&amp;D–Tetanus Toxoid</td>
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<td>C</td>
<td>Sw</td>
<td>G</td>
<td>Sh</td>
<td>2</td>
</tr>
<tr>
<td>Encephalomyelitis Vaccine E&amp;W</td>
<td></td>
<td>H</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Encephalomyelitis Vaccine E&amp;W–Tetanus Toxoid</td>
<td></td>
<td>H</td>
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<tr>
<td>Normal Serum, Equine Origin</td>
<td></td>
<td>H</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Pulmo-Clear [Caprine Serum Fraction, Immunomodulator]</td>
<td></td>
<td>H</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Tetanus Antitoxin, Equine Origin</td>
<td></td>
<td>H</td>
<td>C</td>
<td>Sw</td>
<td>G</td>
<td>Sh</td>
</tr>
<tr>
<td>Tetanus Toxoid – Concentrated</td>
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INDICATIONS: For use in healthy female cattle 4 to 12 months of age as an aid in the prevention of infection and abortion caused by *Brucella abortus*.

For use by or under the supervision of a veterinarian. Distribution in the United States shall be limited to authorized recipients designated by proper state officials under such additional conditions as these authorities may require.

DIRECTIONS: Store at 2° to 7° C. Rehydrate with accompanying vial of sterile diluent. Diluent is a buffered solution specifically prepared for use with this vaccine. Shake well after rehydration. Use entire contents when first opened. Do not vaccinate within 3 weeks before slaughter.

Do not administer to pregnant cows.

PRECAUTIONS: Anaphylactoid reaction may occur following administration of products of this nature. If noted, administer adrenalin or equivalent.

In the event of accidental human exposure, consult a physician. WARNING – this organism is Rifampin and Penicillin resistant.

Burn, autoclave, or chemically disinfect container and all unused contents.

DOSAGE AND ADMINISTRATION: Inject 2ml subcutaneously.

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INDICATIONS: For use as an aid in the temporary prevention or treatment of Clostridial enterotoxemia in cattle, sheep, and goats caused by types B, C, and D toxin and in swine when caused by type C. Type D is not known to cause disease in swine and type B is not a significant problem in North America.

Contains phenol and thimerosal as preservatives.

DIRECTIONS: Store at 2° to 7° C. Do not freeze. Shake well before use. Use entire contents when first opened. Do not vaccinate within 21 days before slaughter.

PRECAUTIONS: Anaphylactoid reaction may occur following administration of products of this nature. If noted, administer adrenalin or equivalent.

DOSAGE AND ADMINISTRATION: For prevention lasting approximately 3 weeks, the following doses should be administered subcutaneously:

- Suckling lambs, goats, and pigs 5ml
- Suckling calves 10ml
- Feeder lambs and pigs 10ml
- Feeder calves and cattle 25ml

For treatment, double the preventative dose.

A more rapid effect can be achieved by intravenous administration, with repeat dosages as often as 12 hour intervals.
INDICATIONS: For use in healthy cattle, sheep and goats as an aid in the prevention of enterotoxemia caused by Clostridium perfringens Types B, C, and D. Cl. perfringens Type B is not a significant problem in North America.

For use in healthy swine as an aid in the prevention of enterotoxemia caused by Clostridium perfringens Type C.

Contains thimerosal as a preservative.

DIRECTIONS: Store at 2° to 7° C. Do not freeze. Shake well before use. Use entire contents when first opened. Do not vaccinate within 21 days before slaughter.

Vaccinate sufficiently in advance of feeding concentrated rations to provide a minimum of 2 weeks after second dose for adequate immunity to develop.

PRECAUTIONS: Anaphylactoid reaction may occur following administration of products of this nature. If noted, administer adrenalin or equivalent.

DOSAGE AND ADMINISTRATION: Inject 2 ml. subcutaneously or intramuscularly. Repeat full dose in 3 to 4 weeks.

INDICATIONS: For use in healthy cattle, sheep and goats as an aid in the prevention of enterotoxemia caused by Clostridium perfringens Types B, C, and D. Cl. perfringens Type B is not a significant problem in North America.

For use in healthy swine as an aid in the prevention of enterotoxemia caused by Clostridium perfringens Type C.

For the long-term protection against tetanus.

Contains thimerosal as a preservative.

DIRECTIONS: Store at 2° to 7° C. Do not freeze. Shake well before use. Use entire contents when first opened. Do not vaccinate within 21 days before slaughter.

Vaccinate sufficiently in advance of feeding concentrated rations to provide a minimum of 2 weeks after second dose for adequate immunity to develop.

Tetanus toxoid requires 3 to 4 weeks to establish effective protection that will last several months. Booster injections should be made annually, or, in event of injury, regardless of interval.

PRECAUTIONS: Anaphylactoid reaction may occur following administration of products of this nature. If noted, administer adrenalin or equivalent.

DOSAGE AND ADMINISTRATION: Inject 2 ml. subcutaneously or intramuscularly. Repeat full dose in 3 to 4 weeks.
INDICATIONS: For use in healthy equines as an aid in the prevention of Eastern and Western types of encephalomyelitis.

Formalin inactivated adjuvanted equine encephalomyelitis vaccine. Contains thimerosal, penicillin, and streptomycin as preservatives.

DIRECTIONS: Store at 2° to 7° C. Do not freeze. Do not vaccinate within 21 days before slaughter.

Shake well before use. Use entire contents when first opened.

PRECAUTIONS: Anaphylactoid reaction may occur following administration of products of this nature. If noted, administer adrenalin or equivalent.

DOSAGE AND ADMINISTRATION: Inject two 1ml doses intramuscularly with an interval of 3 weeks between injections. Revaccinate annually using a single dose and whenever an epidemic situation develops and exposure is likely.

Encephalomyelitis is spread by biting insects, so animals should be vaccinated prior to the time insects become prevalent.

INDICATIONS: For use in healthy equines as an aid in the prevention of Eastern and Western types of encephalomyelitis and tetanus.

Formalin inactivated adjuvanted equine encephalomyelitis vaccine in combination with concentrated tetanus toxoid. Contains thimerosal, penicillin, and streptomycin as preservatives.

DIRECTIONS: Store at 2° to 7° C. Do not freeze. Do not vaccinate within 21 days before slaughter. Shake well before use. Use entire contents when first opened.

PRECAUTIONS: Anaphylactoid reaction may occur following administration of products of this nature. If noted, administer adrenalin or equivalent.

DOSAGE AND ADMINISTRATION: Inject two 2ml doses intramuscularly with an interval of 3 weeks between injections. Revaccinate annually using a single dose and whenever an epidemic situation develops and exposure is likely.

Encephalomyelitis is spread by biting insects, so animals should be vaccinated prior to the time insects become prevalent.
INDICATIONS: For use as an aid in non-specific treatment of equine infections and disease conditions. Also recommended for non-specific treatment of anemia haemorrhage, shock following injury, and debilitating conditions for which blood enrichment is desired. Administration provides supplemental equine albumin, globulins, and associated fluids.

Contains phenol and thimerosal as preservatives.

DIRECTIONS: Store at 2° to 7° C. Do not freeze. Use entire contents when first opened. Do not vaccinate within 21 days before slaughter.

PRECAUTIONS: Anaphylactoid reaction may occur following administration of products of this nature. If noted, administer adrenalin or equivalent.

A condition referred to as “serum hepatitis” infrequently occurs in horses. The literature associates this partially with the injection of biologics containing equine serum or tissue. However, efforts to experimentally reproduce such a condition in horses have not been successful.

DOSAGE AND ADMINISTRATION: Inject subcutaneously, intramuscularly, or intravenously, 50ml - 250ml depending upon weight of animal and judgment of veterinarian administering. Repeat doses may be given.

Use multiple sites or IV for large doses. It is recommended to limit injections to no more than 10ml per injection site.

WNV TREATMENT

West Nile Virus Antibody, Equine Origin
Conditional USDA License
Efficacy and potency test studies in progress

- Concentrated
  - Reduced dose volume
- Purified
  - Clear liquid product
- Easy & Ready to Use
  - Use straight from the bottle – No dilution required
- Clean & Natural
  - Contains no phenol – No need to pre-treat for possible reactions
- Safe
  - Meets USDA field safety requirements

Use West Nile Virus Antibody, Equine Origin when disease is detected in vaccinated or unvaccinated horses

Administered intravenously, West Nile Virus Antibody provides immediate WNV antibody in the bloodstream, enhancing the animal’s ability to fight and neutralize virus present, and will aid in the overall treatment protocol.

A Colorado Serum Company labeled product

For use by or under the supervision of a veterinarian
INDICATIONS: For use as an aid in the treatment of horses with Lower Respiratory Disease. To be used in combination with adjunctive therapy.

Contains phenol and thimerosal as preservatives.

NOTE: The complex nature of Lower Respiratory Disease makes treatment difficult for veterinarians who commonly prescribe antibiotics, anti-inflammatory drugs, bronchodilators, and expectorants. Cases often improve during treatment, but conditions can rapidly reoccur when treatment is stopped – extending recovery time and delaying a return to full health.

To address chronic and reoccurring cases of Lower Respiratory Disease, Pulmo-Clear works to modulate the immune system – allowing the horse improved recovery from the clinical conditions associated with ELRD.

CONTRAINDICATION: Corticosteroids and other drugs which may cause immunosuppression are not recommended for use with this product.

DIRECTIONS: Store at 2° to 7° C. Do not freeze. Use entire contents when first opened. Do not vaccinate within 21 days before slaughter.

PRECAUTIONS: Anaphylactoid reaction may occur following administration of products of this nature. If noted, administer adrenalin or equivalent.

In the event of accidental human exposure, consult a physician.

DOSAGE AND ADMINISTRATION: Inject one 2ml. dose deep intramuscularly in the neck. Repeat this dose in 7-10 days in the opposite side of the neck. Moderate exercise aids in preventing or reducing local reaction. Discontinue use if a severe local reaction occurs.

Proper diagnosis, selection of treatment modalities, and follow-up examinations for Lower Respiratory Disease in equines require veterinary expertise. Therefore, it is recommended that Pulmo-Clear be used by or under the supervision of a veterinarian.

Efficacy studies demonstrate that Pulmo-Clear [Caprine Serum Fraction, Immunomodulator], when used with adjunctive therapy, successfully clears Equine Lower Respiratory Disease (ELRD), leading to increased recovery rates and reduced recovery times in affected horses. In fact, combined data from field studies show that Pulmo-Clear helps promote an overall ELRD recovery rate as high as 86 percent.

A diagnosis of lower airway disease should be based upon history, clinical examination and endoscopic findings of exudate in the trachea.

*Contact PBC for summary study data
INDICATIONS: For use as an aid in the prevention and treatment of tetanus in animals.

Contains phenol and thimerosal as preservatives.

DIRECTIONS: Store at 2° to 7° C. Do not freeze. Use entire contents when first opened. Do not vaccinate within 21 days before slaughter.

Administration of Tetanus Antitoxin is recommended for use whenever a non-immunized animal, or one whose immune status is unknown, suffers a deep penetrating wound that has or may become contaminated with soil. It provides quick but short-term protection. Antitoxin may also be administered to animals following castration, docking, and other operations performed on premises upon which tetanus infection has been a problem.

Vaccination with tetanus toxoid is recommended for healthy domestic animals not infected with tetanus, to establish an active immunity for prevention against disease.

PRECAUTIONS: Anaphylactoid reaction may occur following administration of products of this nature. If noted, administer adrenalin or equivalent.

In the event of accidental human exposure, consult a physician.

A condition referred to as “serum hepatitis” infrequently occurs in horses. The literature associates this partially with the injection of biologics containing equine serum or tissue. However, efforts to experimentally reproduce such a condition in horses have not been successful.

DOSAGE AND ADMINISTRATION: Tetanus antitoxin confers immediate passive immunity lasting about 7 to 14 days. 1500 units administered subcutaneously or intramuscularly is the recommended dose for prevention.

Large doses of Tetanus Antitoxin may provide beneficial response in animals already infected with tetanus, but success of treatment is not assured. For treatment, administer 10,000 - 50,000 units to horses and cattle; 3,000 - 15,000 units to sheep and swine.

Animals that suffer slow healing puncture wounds or deep abrasions should be given a second dose of antitoxin in 7 days and additionally as considered necessary.

INDICATIONS: For use as an aid in the prevention of tetanus.

Contains thimerosal as a preservative.

DIRECTIONS: Store at 2° to 7° C. Do not freeze. Shake well before use. Use entire contents when first opened. Do not vaccinate within 21 days before slaughter.

Vaccination with Tetanus Toxoid is recommended for healthy domestic animals, not infected with tetanus, to establish an active immunity for prevention against disease. Protective antibody levels usually occur about two weeks after the second injection of the primary immunization series.

In contrast, administration of Tetanus Antitoxin is recommended for immediate, emergency, passive treatment of exposed animals with an unknown vaccination history or with signs of tetanus infection. Refer to the Tetanus Antitoxin product circular for full information.

PRECAUTIONS: Anaphylactoid reaction may occur following administration of products of this nature. If noted, administer adrenalin or equivalent.

DOSAGE AND ADMINISTRATION: Inject subcutaneously or intramuscularly as follows:

- Horses & cattle: Two doses of 1ml each
  - Use intramuscularly for horses, as local reactions are more likely to occur if injected subcutaneously
- Sheep, goats, & swine: Two doses of 0.5ml each

Interval between doses should be approximately 30 days.

Revaccinate annually using a single dose.
Serum antibody products are, as the name implies, derived from serum – the fraction of whole blood that contains the disease-fighting proteins known as antibodies. Serum antibody product technology is not new. In fact, it has been used successfully for decades against a myriad of animal diseases.

A serum antibody product, when produced as a veterinary biological, is serum from hyperimmunized animals which have high titers of specific antibodies against certain disease-causing organisms. Hyperimmunization allows the donor animals’ immune systems to consistently produce an abundance of antibodies far in excess of those found in normal animals.

One of the valuable attributes of serum antibody products is that they confer passive immunity – providing immediate treatment or prevention of a specific threat in a ready-to-use format. Vaccines, on the other hand, confer active immunity – requiring a minimum of two to four weeks to produce an effective immune response.

**Advantages of serum antibody products:**
- Immediate response
- Can be used for treatment or prevention
- No bacterial resistance
- No drug residues
- Will not interfere with antibiotic therapy
- Natural - derived from live animals (thimerosal and phenol are added as preservatives)

**Use serum antibody products:**
- As an immediate, but temporary prevention of a disease
- As a treatment of a current disease
- To supplement inadequate consumption or quality of colostrums
- To supplement or support an antibiotic treatment
- To treat animals that are not responding to treatment
- In the face of an epizootic outbreak

Remember, serum antibodies may be used for the treatment of sick animals or for the immediate, but short-term (10 to 14 days), prevention of specific diseases in healthy animals. For long-term protection, vaccination should follow about 2 to 3 weeks after the use of a serum antibody product. As always, read and follow the label directions.

Colorado Serum Company and its subsidiary Professional Biological Company manufactures five serum antibody products:

- **Bovi-Sera Serum Antibody**
- **Clostridium Perfringens C&D Antitoxin**
- **Respiragen Serum Antibodies**
- **Tetanus Antitoxin, Equine Origin**
- **West Nile Virus Antibody, Equine Origin**
POLICIES AND TERMS OF SALE
Professional Biological products are for sale only to graduate Veterinarians

• Prepaid ground shipping rates on orders of $100 or more
• Orders less than $100 will be assessed $10 plus shipping costs
• Current shipping rates will be assessed on customer expedited orders of one, two, or three-day select
• Deliveries requiring in excess of four concurrent working days will be shipped UPS 3-Day select unless customer advises otherwise
• Payment terms are Net 30 days from invoice date

RETURN POLICY

• Some products are NOT eligible for return or credit – please inquire
  • Brucella Abortus Vaccine (RB-51) is eligible for 75% return credit of the original purchase price – credit must be applied to future purchases within one (1) year
• Request for return/credit authorization of eligible products must be in writing within 90 days of expiration date printed on product
• Return/credit request must include:
  • Product number & size
  • Serial number & expiration date
  • Quantity to be returned
  • Date of purchase and invoice number, if available
• Products must be returned through original purchaser
• Credit will be issued at lower of purchase or current price and must be applied ONLY to future purchases within one year
The PEAK of QUALITY

Since 1923

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