FrontLine®
TECHNICAL INFORMATION FOR TODAY'S FEED PROFESSIONAL

Red Blood Cell Milk Replacers

An Economic Alternative in Calf Nutrition

Around the world research has been conducted analyzing the value of spray-dried animal plasma and spray-dried blood. These products have become critical ingredients in diets for young animals. Spray-dried whole blood has also been used for a number of years as a high-quality feed ingredient.

Red blood cells have unique protein obtained from the plasma separation process - highly concentrated protein, with attributes of milk protein. Field results in milk replacer indicate that Red Blood Cell milk replacers have excellent palatability.

What exactly are red blood cells?

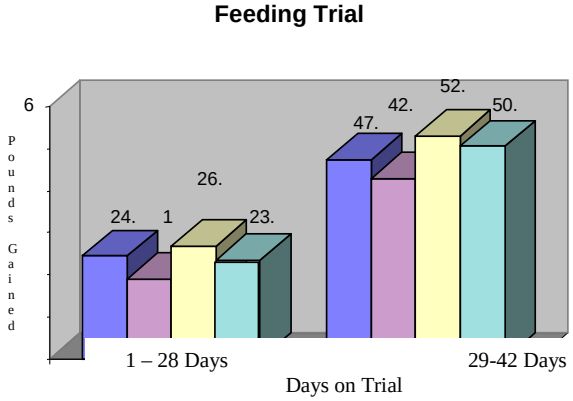
Spray-dried animal blood cells – is the product obtained by spray-drying red and white blood cells which have been partly separated away from the plasma of clean, fresh whole animal blood by chemical and mechanical processing. It is dried by spraying into a draft of warm, dry air which reduces the blood to finely divided particles with a maximum moisture of 8%, minimum crude protein of 90% and minimum solubility of 80%.

How can I be assured that I receive a high-quality, clean product?

Consistency of our high-quality, specially designed Red Blood Cell milk replacers is assured by several routine in-process and finished product checks including:

- Protein
- Moisture
- Solubility
- Microbial
  - Standard Plate Count
  - Coliforms/*E.coli*
  - *Salmonella*
  - Yeast & Molds

What kind of calf performance can I expect with RBC?



Milk Products
The Milk Replacer Source™
FOR MORE INFORMATION, CALL OR WRITE MILK PRODUCTS, LLC
P.O. Box 150, Chilton, Wisconsin 53014, (920) 849-2348, Fax (920) 849-9014 www.milkproductsinc.com

Summary Results: There was no statistical difference in performance between groups. From a practical standpoint, on this trial the combined RBC groups showed a higher weight gain average than the control.

On this trial, 24 Holstein heifer calves were randomly assigned to one of four treatment groups.

1. Control - 20% protein, 20% fat milk replacer
with all milk protein sources. Medicated with Neo-Terramycin® (400/200 grams/ton respectively).

2. RBC#1 – 20/20 milk replacer with spray-dried
animal blood cells replacing a portion of the milk protein, and medicated with Neo-Terramycin® at the same rate as the control diet.

3. RBC #2 – 20/20 milk replacer utilizing RBC, medicated with 45.4 grams/ton of Deccox (Decoquinate®).

4. RBC #3 – 20/20 milk replacer utilizing RBC, including a probiotic culture.

What economic effect will an RBC milk replacer have on my bottom line?

There are many factors to consider when assessing the economic impact of a product in a given operation. Some of these factors include: calf performance, unit cost, labor cost, and the medication costs relative to treatments calves require. Research results have shown an approximate savings of $2.00/calf.

Are there other considerations I should make when deciding to use a red-blood cell milk replacer over a regular all-milk?

Yes.

- Red Blood Cell (RBC) Milk Replacers can and will stain equipment.
- An RBC milk replacer will have a "chocolate milk" appearance.
- A calf's stool color will turn black.
- RBC milk replacers will need additional mixing to gain the desired solution.

Who should consider using an RBC milk replacer?

- Larger dairymen and/or wet calf beef feed lots
- Calf ranches
- Professional heifer growers
- Operations with mechanical/bulk mixing
- Calf raisers desiring new technology
- Calf feeders who can truly measure calf performance.

Red Blood Cell-based milk replacers can be complementary products to your existing milk replacer line-up. They can be used to target market niches that have been unattainable in the past. For complete information and research data, write Milk Products Inc., 435 East Main Street, Chilton, WI 53014.

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