Sulfadimethoxine is a white, almost tasteless and odorless compound. Chemically, it is \( \text{N}^1-(2,6\text{-dimethoxy-4-pyrimidinyl})\text{1,3-dihydro-2H-imidazol-2-amine-5-sulfonamide} \). Its structural formula is:

\[
\text{H}_2\text{N} \quad \text{SO}_2\text{NH} \quad \text{SO}_2\text{NH} \quad \text{OCH}_3 \quad \text{OCH}_3 \quad \text{NH} \quad \text{H}
\]

**CLINICAL PHARMACOLOGY:** Sulfadimethoxine has been demonstrated clinically in the laboratory to be effective against a variety of organisms, such as *streptococci*, klebsiella, proteus, shigella, salmonella, staphylococci, escherichia, and salmonella. These organisms have been demonstrated in respiratory, gastrointestinal, urinary, and soft tissue infections of dogs and cats.

The systemic sulfonamides which include sulfadimethoxine are bactericidal agents. Sulfonamides competitively inhibit bacterial synthesis of folic acid (pteroylglutamic acid) from para-aminobenzoic acid. Mammalian cells are capable of utilizing folic acid in the presence of sulfonamides.

The tissue distribution of sulfadimethoxine, as with all sulfa-drugs, depends on the nature of the drug and the pH of the medium. The following illustrates the possibility of tissue distribution. The various tissues having high concentrations of sulfadimethoxine:

- Liver
- Kidney
- Lungs
- Brain

In the dog, sulfadimethoxine is not excreted as in most other animals, and it is excreted predominately as the unchanged drug. Sulfadimethoxine has a relatively high solubility in the usual dose range occurring in the kidney, facilitating the possibility of precipitation and crystalluria. Slow renal excretion results from a high degree of tubular reabsorption, and plasma protein binding is very high, providing a blood reservoir of the drug. Thus, sulfadimethoxine maintains higher blood levels than most other long-acting sulfonamides. Single, comparatively low doses of Albon give rapid and sustained therapeutic blood levels.

To assure successful sulfonamide therapy (1) the drug must be administered intramuscularly or subcutaneously, (2) therapeutic effective concentrations must be maintained in the blood throughout the treatment period, (3) treatment should continue for a short period of time after the clinical signs have disappeared, and (4) the causative organisms must be sensitive to this class of drugs.

**INDICATIONS AND USAGE:** Albon is indicated for the treatment of respiratory, gastrointestinal, urinary, and soft tissue infections of dogs and cats. It is bacteriostatic against a variety of organisms, such as *streptococci*, klebsiella, proteus, shigella, salmonella, staphylococci, escherichia, and salmonella. These organisms have been demonstrated in respiratory, gastrointestinal, urinary, and soft tissue infections of dogs and cats.

**LIMITATIONS:** Sulfadimethoxine is not effective in oral or rectal infections. Chemically, it is \( \text{N}^1-(2,6\text{-dimethoxy-4-pyrimidinyl})\text{1,3-dihydro-2H-imidazol-2-amine-5-sulfonamide} \). Its structural formula is:

**WARNING:** Not for human use.

**PRECAUTIONS:** During treatment period, make certain that animals maintain adequate water intake. If animals show no improvement within 3 or 4 days, reevaluate your diagnosis.

**DOSAGE AND ADMINISTRATION:** Initial Dose: 25 mg/lb (55 mg/kg) of animal body weight. Subsequent Daily Dose: 12.5 mg/lb (27.5 mg/kg) of animal body weight. Treatment should be initiated with Albon Oral Suspension 5%, per 10 lb of body weight (25 mg/lb or 55 mg/kg) as an initial dose, followed by 12 tsp/10 lb of body weight (12.5 mg/lb or 27.5 mg/kg) every 24 hours thereafter. Representative weights and doses are indicated in the following table:

<table>
<thead>
<tr>
<th>Animal Weight</th>
<th>Initial Dose 25 mg/lb (55 mg/kg)</th>
<th>Subsequent Daily Dose 12.5 mg/lb (27.5 mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 lb (2.2 kg)</td>
<td>1/2 tsp (2 1/2 mL)</td>
<td>1/2 tsp (1 1/2 mL)</td>
</tr>
<tr>
<td>10 lb (4.5 kg)</td>
<td>1 tsp (5 mL)</td>
<td>1 tsp (2 1/2 mL)</td>
</tr>
<tr>
<td>20 lb (9.1 kg)</td>
<td>2 tsp (10 mL)</td>
<td>2 tsp (5 mL)</td>
</tr>
<tr>
<td>40 lb (18.2 kg)</td>
<td>4 tsp (20 mL)</td>
<td>4 tsp (10 mL)</td>
</tr>
</tbody>
</table>

**Additional Info:**

- Colors:
  - Black
  - White

**TOXICITY AND SAFETY:** Data regarding acute and chronic toxicities of sulfadimethoxine indicate the drug is very safe. The LD50 in mice is greater than 2 g/kg of body weight when administered intraperitoneally and greater than 16 g/kg when administered orally. In dogs receiving massive oral doses of 5.2 g/kg of body weight, adverse effects observed. Dogs given 180 mg/lb of body weight orally daily for 12 weeks showed no signs of toxicity.

**STORAGE:** Store at controlled room temperature 15°–30°C (60°–86°F).

**SUPPLIED:** Albon Oral Suspension is available in 10- and 60-mL bottles; each tsp (5 mL) contains 250 mg sulfadimethoxine as a flavored powder. The powder is contained in a coated-flavored carrier.

**INDEX:**

1. D. Verschoof
2. C. Andrews

**DISPOSITION:**

- State: 80 lb (36.4 kg)
- 40 lb (18.2 kg)
- 20 lb (9.1 kg)
- 10 lb (4.5 kg)
- 5 lb (2.2 kg)

**COUNTRY:**

- US

**Additional Info:**

- Colors:
  - Black
  - White

**REFERENCE:**


5. NAS: 1963. Approved by FDA

**Notes:**

- 2. Z. 2.09.98
- 9. 2.09.98
- 9. 2.09.98

**Revised:** January 1993

**Distributed:** Zoetis Inc.

Kalamazoo, MI 49007

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