

AVISHKAR 2025

**Project Title: Polyherbal Powder Formulation
for Lumpy Skin Disease**

Category: Agriculture & Animal Husbandary

Code:



Abstract

Recently, Lumpy Skin Disease has been a terrifying threat to cattle in Southeast Asia. Lump-like nodules are developed in the external skin and mucous membrane with fever. The economic importance of LSD limited numbers of studies are accessible on this extremely devastating arthropod borne disease in south and East Asian states. In future there are greater chances of this LSDV are also transmit into the humans. For avoiding this, study of lumpy skin disease is most important. We can also cure LSD with herbal treatment we have some evidence of this in our research.

Introduction

Lumpy Skin Disease (LSD) is an infectious disease in cattle caused by Lumpy Skin Disease Virus (LSDV). Considering the disease burden, morbidity and mortality of cattle are more sensitive than Buffalows and other ruminants. Unfortunately, vaccines are used to control disease transmission, but they do not cure the LSD.

The incubation period ranges from 1-4 weeks leading to viremia. It is commonly arthropod-borne contagious illness and correspondingly the non-vector spreading through body discharge. It mainly originated in African countries.

Disease can appear several hundred kilometers away from initial outbreak sites within a short time. It is transmitted by blood feeding insects like certain species of Mosquitoes and flies or ticks sometimes it also causes by direct contact (cattle to cattle) and infected object or instruments. It also spread through saliva and contaminated feed and fodder. Despite the economic importance of LSD limited number of studies is accessible on this extremely devastating arthropod borne disease in south and east Asian states. Recurrent outbreak and reappearance of disease in various parts of the world.

Aims & Objective

- ❖ To Prepare safe dosage form.
- ❖ To Prepare herbal base powder formulation against LSD.
- ❖ To prepare inexpensive dosage form.
- ❖ For preventing the economic loss of country.



Methodology

Dusting Powder

- Trituration Method
 - 1] Weigh the required quantities of base powder and active ingredients.
 - 2] Mix the powder in a mortar using pestle.
 - 3] Triturate the powder thoroughly until a homogenous mixture is obtained.
 - 4] Optionally, Sift the mixture to ensure fine particle size and homogenous,
 - 5] Blend the Powder thoroughly .
 - 6] Perform the evaluations of Powder.

Oral Powder

- 1] Start by wearing protective gloves and a mask to ensure hygiene.
- 2] Weigh and measure your ingredients accurately.
- 3] Combine the base powder (filler, binder, disintegrant) (90-95%) and active ingredient (5-10%).
- 4] Add remaining amount of Active pharmaceutical ingredient in formulation.
- 5] Add Lubricant in appropriate quantity.
- 6] Blend thoroughly to ensure even distribution.
- 7] If adding colorant, flavoring agent and preservative, do so sparingly and blend well.

Formulation Table (For 100gm)

HerbaVive Dusting Powder

Sr. No	Ingredient	Quantity (gm.)
1	API	45
2	Lactose	25
3	Starch	18
4	Mag. Stearate	7
5	Na. Benzoate	3
6	Rose Powder	2

AniBotanix Oral Powder

Sr. No.	Ingredient	Quantity (gm.)
1	API	58
2	Starch	10
3	Talc	10.5
4	Zinc Oxide	6
5	Kaolin	5
6	Mag. Stearate	4.5
7	Calamine	2.3
8	Rose Powder	1.2
9	Methyl Paraben	2

Discussion

Evaluation Parameter:

Herba Vive

1) Organoleptic Properties

Color	Dull brown
Odor	Aromatic
Taste	Characteristics

2) Solubility Profile

Liquid	Solubility
Water	Slightly soluble
Ethanol	Insoluble

3) Sieve Analysis: 100 mesh size sieve

4) pH : 7.1

5) Bulk Density :

Mass/ Bulk Volume = $10/18 = 0.55 \text{ g/ml}$

4) Tap Density :

Mass/ Tap Volume = $10/12 = 0.71 \text{ g/ml}$

5) Carr's Index :

$$\text{TD-BD/TD} \times 100 = 0.71 - 0.55 / 0.71 \times 100 = 22.53\%$$

Passable

6) Hausner Ratio

$$\text{TD/BD} = 0.71 / 0.55 = 1.29$$

Passable

7) Moisture Content

$$\text{Initial Wt.} - \text{Final Wt.} / \text{Initial Wt.} \times 100$$

$$98 - 93.4 / 98 \times 100 = 4.6\%$$

Conclusion:

Lumpy skin disease is one of the most economically significant trans boundary, viral disease of domestic animal. It is economically significant in animals because of chronic debility, decreased milk production and weight, damaged skin, abortion and mortality.

Result:

Early treatment finding is essential for the prevention of nodular skin disease (LSD), then only we can bring the emerging infectious disease in cattle under control. We can also cure Lumpy Skin Disease (LSD) with herbal remedies, we have seen some evidence of this in our research. This herbal powder Fastly shows its effects like easily dry this ruptured skin. So, the herbal powder is the best treatment for Lumpy Skin Disease.