

# Impact of Bovine Mastitides on Chemical Composition of Raw Milk in Govt. Dairy From of Jabalpur District (M.P.)

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## Abstract

In present study deal Abstract o chemical compositional of raw min Jabalpur district. The study wan conducted using california mastitis test for screening of subclinical mastitis lind Mitramiler to analyse chemical composition of mik A total 45 quarter mi samples collected from various dairy forms of Jabalpur wee unified All parameter chemical composition of milk shows prevalent occurrence of mastitis accompanied with different potential risk factors wa an important problem affecting dairy production there integrated control measures and monitoring were Suggested.

**Keywords:** Mastitis, Dairy Cattle, Milk, Chemical Composition.

## Introduction

Milk is one of most important food for human beings. It is world wide recognized as a complete diet due to its essential composition Battaglia (2007) Tavaid et al (2009) In recent year, the demand of milk is increased world wide due to increased population Klass (2000). Therefore production of milk has been affected by various factors like mastitis Payne and Wilson (1999). Mastitis is inflammation of mammary gland and economically costly for dairy cattle industries. It often classified as subclinical and clinical depending on the severity of the disease, Andrws et al. (2003). The occurrence of mastitis depends on the interaction between microbial agent, host and environmental factors. The changes in chemical composition of raw milk are one at the consequence mastitis in mich animals, Giannechini et. al., (2002)

According to Almaw et al (2009) the cross breed cattle are mostly suffering from sub clinical mastitis and the chemical composition of milk were affected. These disease in dairy cattle affected the animals health and milk quality as well as the dairy farmer economically, Thus the present study was done to estimate prevalence of mastitis and access impact of mastitis on chemical composition of milk in Jabalpur District (M.P.)

## Aim of the Study

The aim of the study is to examine the Impact of Bovine Mastitides on Chemical Composition of Raw Milk in Govt. Dairy From of Jabalpur District (M.P.)

## Materials and Methods

During present study 45 milk samples collected from three day farms of north south and central zone of Jabalpur District from July 2013 to September 2013 The clinical mastitis was diagnosed on the basis of manifestation ot visible sign of inflammation A warm and swollen quarter which had pain upon palpation was considered as clinical mastitis A quarter was considered sub clinically affected when positive by California mastitis test (CMT). An animal which had one or more quarter are positive by CMT was considered positive for sub dinical mastitis Quinn et alt (1994). Milk samples were collected from affected quarter and alto from non affected quarters for comparative study of chemical composition of milk. The samples were collected separately in sterile glass bottles

Milk samples of both mastitic and non mastitic quarter were analyzed according to their collection using ultramilker, Hangzhou Ultrason technologies co. Ltd (2010).

## Result and Discussion

The study shows that out of 45 raw milk samples, 18 samples found the positive sub clinical mastitis and 8 sample were affected with dinical mastitis Table - 2 shows result of milk composition of clinical and

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sub clinical mastitis of cattles. Getahun et al. (2008) and Bahir et al (2010) reported mastitis with prevalence of 24.9 and 28.2% in their respective studies in Selalle. In our studies 20% of Dairy cattle affected with clinical and subclinical mastitis and due

to this disease the chemical composition were altered. It was closed agreement with prevalence of 34.6, 36.7 and 38.1% reported by Abainch and Sintayehu (2001),

**Table - 1**  
**Prevalence of clinical and subclinical mastitis in cattle at quarter level in Jabalpur**

Type of mastitis	No. of animals/quarter Positive N examined	Positive %
<b>Cattle level</b>		
Subclinical	45 animals	18
Clinical		8
Total		26
<b>Quarter level</b>		
Subclinical	180	72
Clinical		32
Total		104

**Table 2 Chemical Composition**

Component	Range of component in healthy cattle	Component in affected
Protein	93mg	74 mg
iodine	117.5 mg	102 mg
Calcium	42 mg	32 mg
Copper	50 mg	42 mg
Cobalt	5.14 mg	3.14 mg
Sulphur	4.5 mg	2.5 mg
Fat	3.7%	1.8 %
Minerals	0.7%	0.3 %

#### Conclusion

The study indicated mastitis as imported disease for the dairy industries. Milk yield, housing and feeding was important the factors precipitating occurrence of mastitis. The two type of mastitis observed at higher prevalence and it is an important cause of deterioration of chemical composition of milk Therefore governmental and non-governmental Institutes working on dairy production should give emphasis on control of mastitis.

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