

# MUN

Milk Urea Nitrogen

## References:

Proceedings of the Maryland  
Nutrition Conference  
Milk Urea Nitrogen: Theory & Practice  
Rick Kohn, Jamie Jonker &  
Rich Erdman  
University of Maryland, College Park  
Jere High, Lancaster DHIA, Lancaster, PA

what is it  
*when to test*  
source of MUN  
normal MUN levels

and what  
to do with them

Contact your field rep for more  
information on MUN testing

You field rep and phone number is:

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Information  
Pamphlet  
from  
Eastern Laboratory Services Ltd.



## Why test

- save feed costs
- increase production
- reduce nitrogen loading in soil and ground water
- improve reproductive efficiency

## What is MUN?

- natural waste product of protein metabolism and means to eliminate excess protein
- approximates amount of excess protein in diet
- management tool to monitor feeding efficiency

## What is source of MUN?

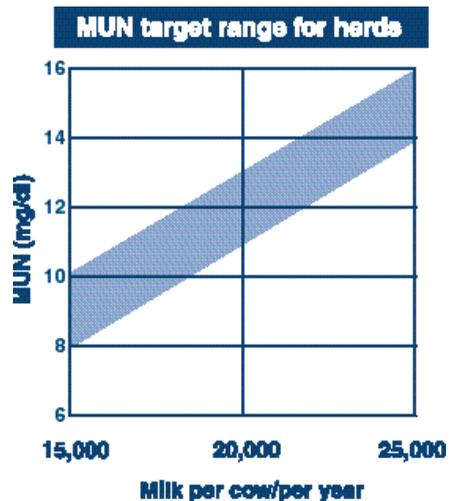
- metabolized and excess protein is converted to urea
- urea is released into blood—blood urea nitrogen (BUN)
- urea diffuses into other body fluids including milk—milk urea nitrogen (MUN)
- concentration in milk about the same as in blood
- milk provides easily obtained samples to estimate blood levels

## What sample should I use for MUN testing?

- generally, sample at least 10 cows to determine an average MUN value
- a tank sample may be used
- if a single tank sample is used, suggest testing by chemical vs. infrared method

## What are normal MUN levels?

- average of individual cows or bulk tank should be between 10 and 16 mg/dl.
- mg/dl. = one thousands of a gram in one tenth of a liter
- herds with higher rolling herd average (RHA) at high end. Lower RHA at low end
- samples taken just before feeding will naturally results in lower values
- see accompanying chart



## How do I use MUN values?

- several factors may be involved if MUN values are outside the expected range
- you should consult with your herd nutritionist or veterinarian to obtain an interpretation of your MUN test results

## How do I arrange for MUN testing?

- contact field representative, or
- contact laboratory at 1-800-837-6776
- your samples will be tested at our Fairlawn, Ohio lab