

AfiLab™

Milk Analyzer

Real Time Measuring of Milk Components

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AfiLab™

- Patented in Europe and pended in USA
- Project carried out in cooperation with Volcani Agricultural Academic Research Institute Israel
- Analysis of milk components

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AfiLab™ Concept:

Automated coupling of the “lab” to each stall in real time.



Free flow Non-interfering measurement allows continuous real time acquisition of milk components during milking for the individual cow.

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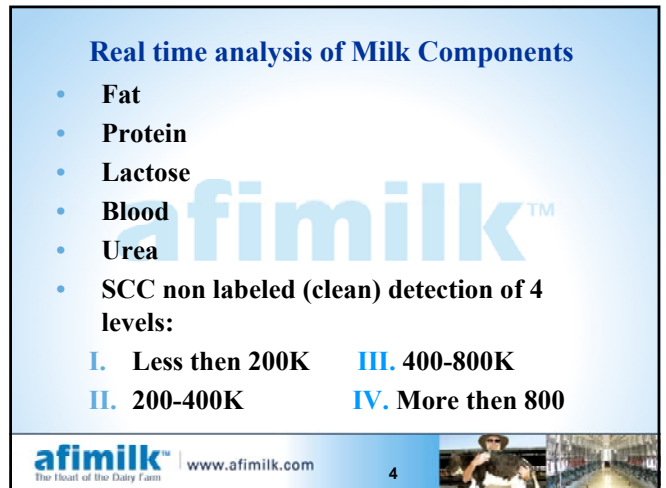


Real time analysis of Milk Components

- Fat
- Protein
- Lactose
- Blood
- Urea
- SCC non labeled (clean) detection of 4 levels:

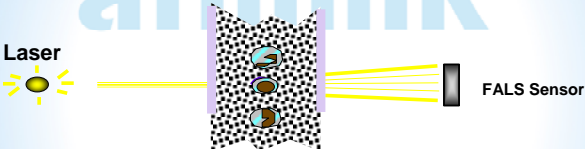
I. Less then 200K	III. 400-800K
II. 200-400K	IV. More then 800

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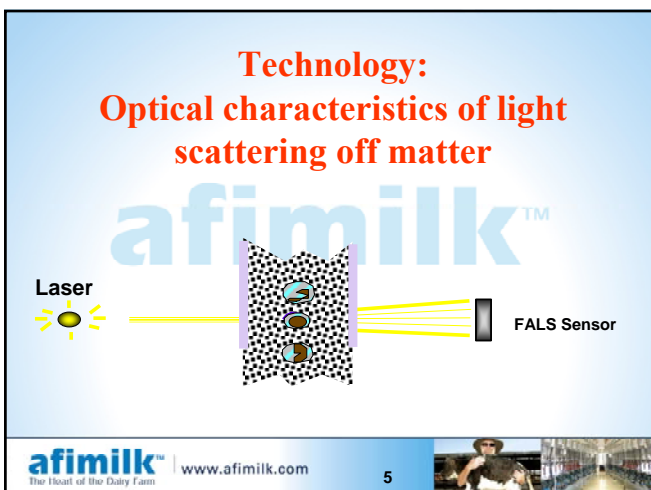


Technology:

Optical characteristics of light scattering off matter



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Basic Configuration

ICAR Approved Milk Meter



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Full System

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AfiLab™ Advantages

- Free flow
- Easy accessibility to data
- Applicable accuracy
- Continuously measures milk components during milking
- Provides daily milk analysis for animal health and performance
- Low maintenance
- Part of the regular cleaning system in the milking parlor
- Clean Measurement – No use of reagents needed
- Cost allows installation in every milking point

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Real time acquisition of milk components during one cow milking

Fat	6.86 % Fat
	2.80 <% Fat>
Sec	542 Sec
	271 <Sec>
Prot	4.27 % Prot
	4.45 <% Prot>
Blood	0.00 % Blood

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Demonstration Tour real time analysis of milk

Fat	6.45 % Fat
	3.44 <% Fat>
Sec	467 Sec
	295 <Sec>
Prot	1.92 % Prot
	2.54 <% Pro>
Blood	0.00 % Bloc

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RT Applications

Real Time Rejection of Bad Milk

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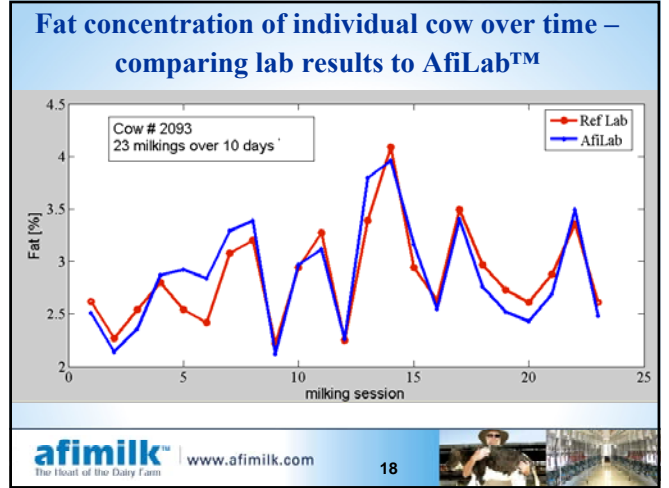
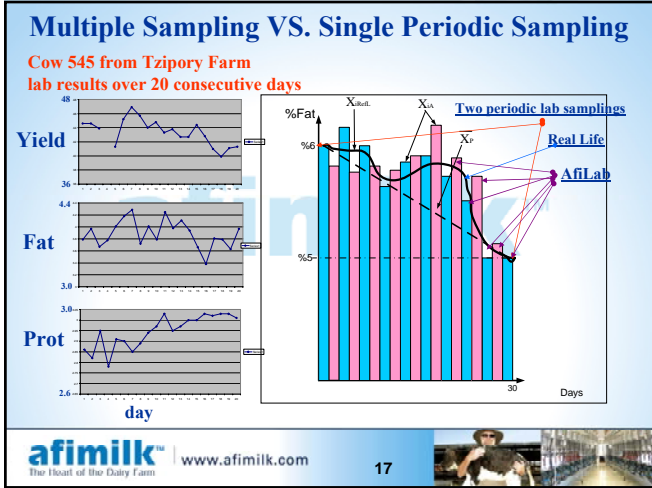
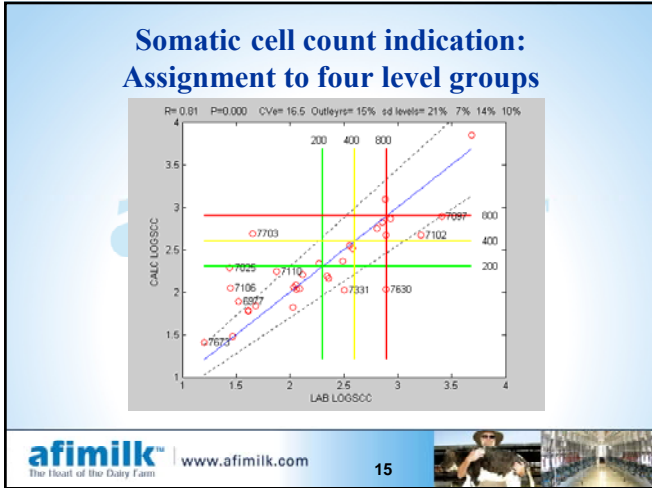
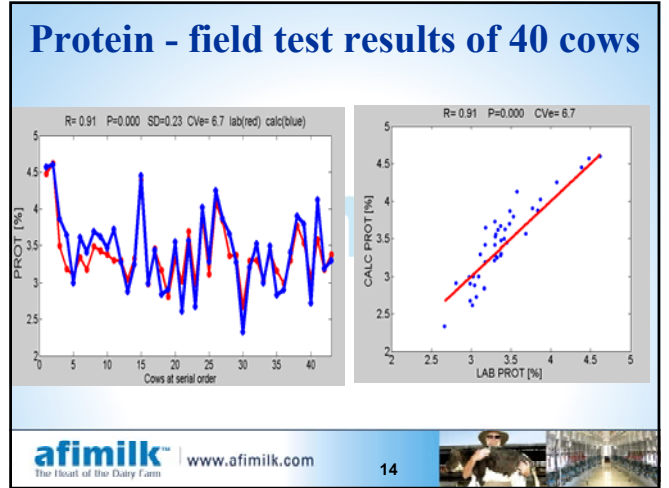
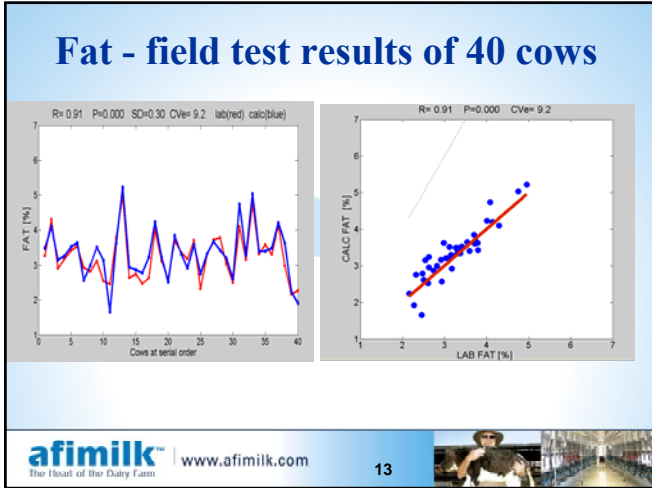
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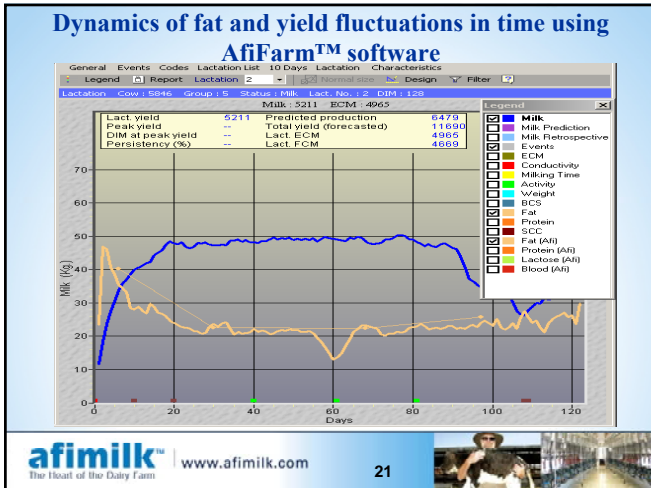
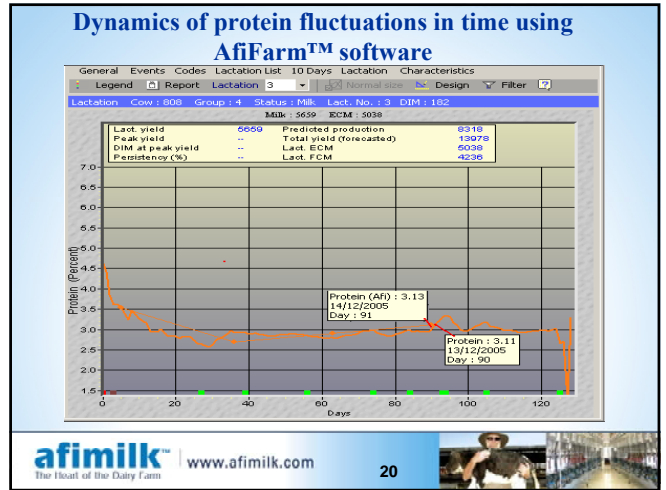
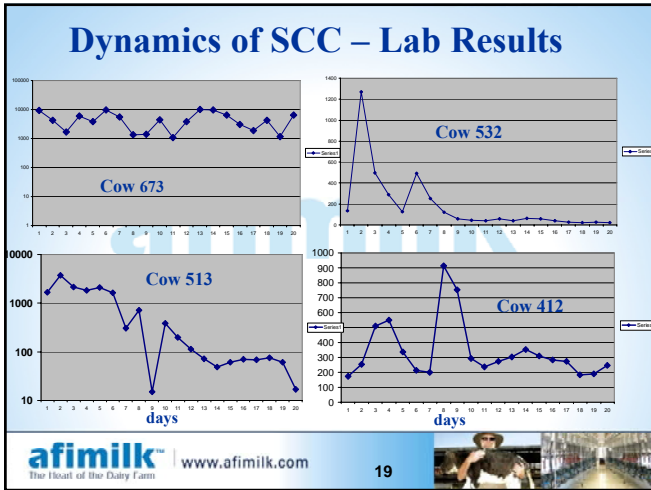
RT Applications

Real time separation of milk according to its ingredient values

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- ### Derived Applications
1. Production economics – production and investment (fcm, ecm)
 2. Equations for predicting dry matter intake of individual lactating cow
 3. NEB – Fat/Protein ratio
 4. SARA – $\geq 10\%$ of a group/herd less than 2.5% Fat
 5. Nutrition-Reproduction Interactions
 6. Milking management and Udder health - Components and flow rate changes as an indication to mastitis (changes in Scc, lactose and conductivity)
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To Conclude:

There are two significant milestones in the evolution of automated dairy data recording

- Electronic Milk Meter
- Activity Meter with Electronic ID

The AfiLab™ is the third

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Thank you for your attention™

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