



Faculty of Animal Science & Export Agriculture
Uva Wellassa University of Sri Lanka

B.A.Sc. Degree Programme
Year III Semester I

End Semester Examination - December 2008/ January 2009

ANS 351-2 Dairy Chemistry

Essay Questions (Section II)

Instructions

Answer all questions in Section II in booklets provided.

No. of questions : One (02)

No. of pages : Two (02)

Time : One hour (1 hour)

Total marks allocated : 60%

Index No:

01. (I) Following data on platform tests were obtained from the milk chilling centre at Uduwara.

Milk Sample	T (°C)	LR	Fat % (Gerber method)	pH	T.Acidity (Lactic Acid %)	COB test (+ve/-ve)	Alcohol test (+ve/- ve)	Test for adulterants		Resazurin 10 min test (Colour)
								Starch (Colour)	Salt (Colour)	
A	20	18	2.2	6.80	0.13	Negative	Negative	Yellow	Red	Blue
B	20	33	2.8	6.51	0.14	Negative	Negative	Blue	Yellow	Blue
C	20	31	4.2	5.1	0.28	Positive	Positive	Yellow	Red	White
D	20	32	4.6	6.71	0.16	Negative	Negative	Yellow	Red	Blue
E	20	29	3.4	5.5	0.25	Positive	Negative	Blue	Red	White
F	20	27	3.8	6.4	0.17	Negative	Negative	Yellow	Red	Blue

T : Temperature

T.Acidity : Titratable Acidity

LR : Lactometer Reading

COB Test : Clot on Boiling test

- If you are the assistant manager of this center, select the sample(s) that you would accept for further processing?
- Give the reasons for each of your selection(s)?
- What are the reasons for rejecting the other sample(s)?
- Calculate the followings for the selected milk sample(s).
 - Specific Gravity
 - Total Solids % (Using formulae method) and
 - SNF %

(50 marks)

(II) a) Define "Standardization of milk"

(20 marks)

b) A milk plant is to prepare 5000 kg of standardized milk containing 4% fat. The dairy has whole milk with 6.0% fat. This is to be standardized with skim milk having only 0.1% fat. Estimate the quantities of whole milk and skim milk needed for the standardization.

(30 marks)

02. Write short notes on followings;

a) Effect of heat treatment on milk constituents

(60 marks)

b) Particle distribution in cow milk

(40 marks)

[End of Section II]

