CUMBERLAND VALLEY ANALYTICAL SERVICES
Laboratory services for agriculture ... from the field to the feed bunk.

Farm:	**WEAVER FALLS DAIRY**	**Copies to:**	
Desc:	**RING DRIED PORCINE BLOOD (10150)**		
Submitter:	**JONES,JOHN**		
Account:	**FOUR STATE FEEDS**		

Lab ID:	**18241 042**
Sampled:	**02/22/2017**
Arrived:	**02/24/2017**
Completed:	**03/07/2017**
Reported:	**03/09/2017**

Rumen and Intestinal Digestibility Assay of Protein
(Multi-Step Protein Evaluation)

DRY MATTER	**% DM**
Residue from 2 hour 135 degree centigrade treatment	82.1

PROTEIN	**%** (as received)	**%** (dm basis)
Protein as nitrogen x 6.25 from Leco nitrogen combustion analysis	81	102.3

SOLUBLE PROTEIN	**% CP**	**% DM**
1 hour water solubility, filtered on 1.5 um filter, as-received particle size	0.8	0.8

RUMEN DEGRADABLE PROTEIN	**% CP**	**% DM**
Total protein less Rumen Un-degradable Protein recovered on filter	13.6	13.9

RUMEN UN-DEGRADABLE PROTEIN	**% CP**	**% DM**
16 hour incubation in rumen fluid in buffer, high group TMR, as-received particle size recovered on filter	86.4	88.5

INTESTINAL DIGESTED PROTEIN	**% CP**	**% DM**
Protein that is rumen un-degradable but digested in pepsin for 1 hour, then in trypsin, chymotrypsin, amylase, and lipase for 24 hours, as-received particle size	76.2	78.1
As percentage of Rumen Undegradable Protein 88.2%		

TOTAL TRACT DIGESTED PROTEIN	**% CP**	**% DM**
Total protein less intestinal un-digested residue recovered by 1.5 micron filter	89.8	92

TOTAL TRACT UN-DIGESTED PROTEIN	**% CP**	**% DM**
Intestinal un-digested residue, recovered on 1.5 micron filter	10.2	10.4

Analysis performed by procedure of D. A. Ross and M. E. Van Amburgh; exception is that determination of rumen un-degradable protein is on material recovered by filter, not freeze drying. This may underestimate rumen undegradable protein by not capturing material, soluble or in suspension, in rumen fluid on some protein sources.