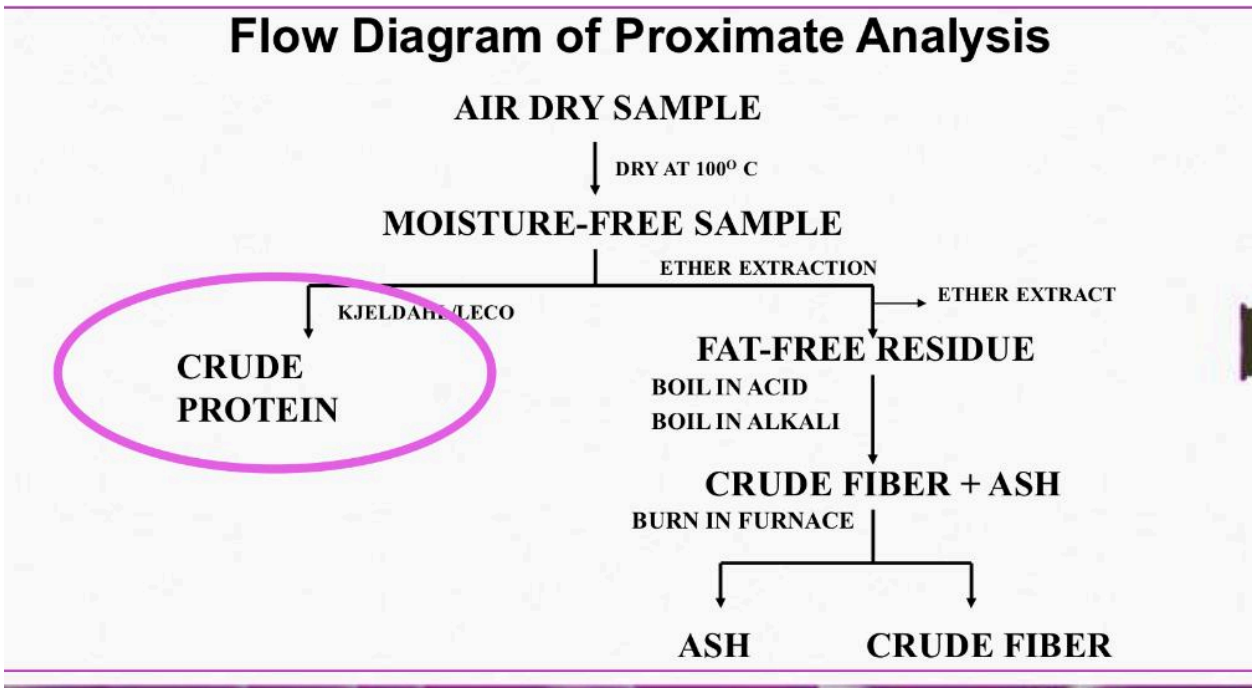
October 8th SI session plan

Proteins are made of: Amino Acids

Sequence = Structure = Function

Fill in the flow diagram of Proximate analysis:



PROXIMATE ANALYSIS

Kjeldahl methodology: Measuring Nitrogen content of the sample

What does this method assume?

1) All N in feed sample = Protein
2) Average N of protein is 16%
3) **Equation**: N% x 6.25 = CP%

Crude Protein Limitations:

1) Assumes all N in feed = Protein

2) NPN lumped in (Urea is a part of CP)

NPN: Non-Protein Nitrogen (includes Urea)

3) No info on Amino acid composition or digestibility

Leco Protein Analysis:
- Gasses collected and Nitrogen Measured
- Faster, safer, easier BUT more expensive
- Same assumption in converting N to proteins as Kjeldahl

What are the 2 types of AA structures?
D and L

Which Structure is Active?
L

What Generalized structure is a side chain that gives each AA its uniqueness?
R Group

20 commonly found in most proteins

9 considered essential in humans

WHO is PVT TIM HALL?????

P : Phenylalanine
V: Valine
T: threonine

T: Tryptophan
I: Isolecuone
M: Methionine

H: Histidine
A: Arginine
L: Lysine
L: Leucine

9 essential for specifically what life stage: adult

Arginine: Semi-essential, important for growing animals

#1 limiting amino acid: Lysine in pigs

#2: methionine

Trick to remember Arginine is Semi-Essential:

KIDS LIKE PIRATES ARGGG!!!!

In Most species adults do not require this

Proline in Poultry

Taurine: beta-sulfonic acid that is NOT present in protein but occurs as a free aa in the diet Cats fed diets deficient in taurine have no degradation of the retina