



# Protein content in Animal Feed (forage & grain)

Stakeholders are today aware that animal feed safety is critical to food safety. Analysis plays a vital role for public health in ensuring that ingredients, production and supplying methods meet quality and safety requirements. Crude protein content analysis is a stringent requirement for quality definition.

Data for this application have been obtained using the EuroVector EA3100 Elemental Analyzer based on enhanced Dumas method. 10 feed samples (forage and grain) have been analyzed for total N% and related crude protein results calculation.

Reference Standard Material (RSM) used for (N) analysis is Acetanilide (N% = 10.363).

**Linear calibration.** Above standard has been weighed to cover the entire range of samples weighs. Linear calibration provided an outstanding correlation factor.

**Sample weigh:** 2-6 mg have been used to grant the higher number of samples before reactor change.

Weaver<sup>NET</sup> is the most complete software dedicated to Elemental Analysis, tailor-made for Euro-Vector Elemental Analyser. Full functionality integrates automatic Protein % content calculation starting from N% element content through editable conversion factor.

Weaver's simple and intuitive user interface also supervises full automatic instrument control and delivers data re-processing, exhaustive results printout, preventive maintenance prompting, gas leak test and full diagnostic.

INSTRUMENTATION	SAMPLE
EA3100 - Analysis time: (N) 120 sec.	Animal feed
Calibration Std: Acetanilide	Weight: 2.0 ÷ 6.0 mg or more





**N% RESULTS: AVERAGE ± SD (4 REPLICATES)  
PROTEIN CONTENT: N% × 6.25 (CONVERSION FACTOR)**

SAMPLE	N% ± SD	PROTEIN%
Sample #1	1.485 ± 0.036	9.28
Sample #2	0.475 ± 0.020	2.97
Sample #3	2.659 ± 0.097	16.62
Sample #4	1.910 ± 0.046	11.94
Sample #5	2.148 ± 0.016	13.43
Sample #6	2.250 ± 0.115	14.06
Sample #7	1.181 ± 0.017	7.38
Sample #8	7.987 ± 0.114	49.92
Sample #9	7.406 ± 0.178	46.29
Sample #10	1.987 ± 0.052	12.42

EuroVector maintains expertise on customer's applications for analytical support: the most representative samples have been grouped as "Samples by Category" providing a series of Application notes for each category.



Biomass,  
Biofuel,  
Wastes



Soils,  
Sediments,  
Rocks



Plants,  
Branches  
leaves,  
Roots,  
Vegetables



Food, Feed  
Oil seeds,  
Sunflowers,  
Cereals,  
Corn,  
Brewing malt...



Coal,  
Coke,  
Peat



Petroleum,  
Lubricants



Organics,  
Synthetic,  
Compounds,  
Polymers  
textiles,  
Pharma,  
Fertilizers