



# Forage Analysis

- **Independent** & UKAS accredited laboratory
- **Fast** sample turnaround
- **Accurate** results assured
- **Comprehensive** range of tests (including forage nutrition and dietary minerals as well as soil, slurry and manure analysis)
- **Reliable** service based on sound science
- **Experience** over more than 20 years
- **Summary** data and trend reports provided

When it comes to forage analysis Sciantec has all the experience and expertise you need.



## Firm foundations

Sciantec is part of the UK's largest analytical testing group focused on providing independent and accredited laboratory services for the land-based sector.

Our understanding and expertise in all aspects of livestock forage analysis has been built over 20 years.

Since the mid-1980s we have analysed a total of more than 600,000 forage samples for our customers throughout the UK.

### Key milestones:

- Pre-1986 all forage analysis used traditional wet chemistry techniques
- From 1986 to 1993 NIR (Near Infrared) analysis was introduced on dried forage samples
- In 1993 Sciantec became the first UK laboratory to launch a commercial NIR service based on the analysis of fresh forage samples ('wet' NIR)
- The wet chemistry calibrations developed by Sciantec to support the use of this 'wet' NIR analysis subsequently formed the basis of the calibrations developed and monitored by the Feed Analysis Assurance (FAA) Group in the late 1990s
- Since 1993 'wet' NIR forage analysis, backed by a significant amount of wet chemistry validation (undertaken on a daily routine), has been the backbone of the Sciantec forage testing service

### Research & development:

- We continually review all aspects of our analytical service provision for forage analysis, working with both customers and other key players in the industry

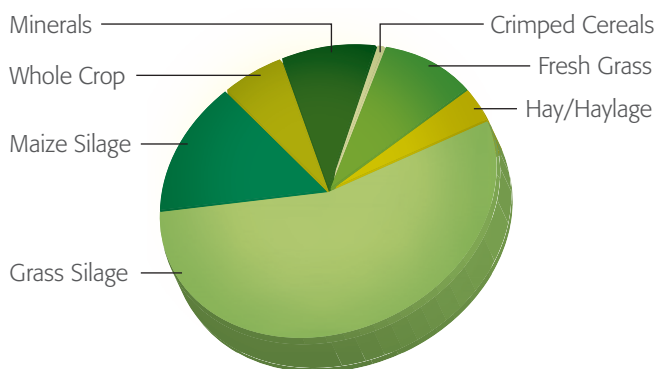


## Quality matters

The quality and accuracy of the analysis is of paramount importance. To ensure accuracy day in, day out, we have a robust internal quality system. At the heart of this system is accreditation by UKAS to the internationally recognised standard for competence – ISO/IEC 17025.

The quality of analysis is further supported by the careful attention we give to all aspects of customer service.

### Typical annual forage analysis split



## Current capability

The list of analyses that we can carry out in forage is very wide ranging. The table below gives an indication of the forage tests that our customers regularly ask us to complete.

	Fresh Grass	Grass Silage	Maize Silage	Whole Crop	Alkalage*	Lucerne	Other Forage	Hay/Haylage	Crimped
D Value	•	•	•	•	•	•	•	•	
ME	•	•	•	•	•	•	•	•	•
FME		•	•	•	•				
NDF	•	•	•	•	•			•	
ADF		•						•	
Ash	•	•	•	•	•	•	•	•	•
Oil	•	•	•	•	•			•	•
Dry Matter Solubility (S)		•							
(a)		•							
(b)		•							
(c)		•							
Starch			•	•	•				•
Bypass Starch			•						
Dry Matter	•	•	•	•	•	•	•	•	•
Potential Intake (FiM)		•							
pH		•	•	•	•				•
Ammonia N *		•	•	•	•	•	•		
Pot. Acid Loading (FiM)		•							
Crude Protein	•	•	•	•	•	•	•	•	•
ERDP		•	•	•	•				
DUP		•	•	•	•				
Nitrogen Solubility (N)		•							
(a)		•							
(b)		•							
(c)		•							
Sugar	•	•						•	
Acetic Acid		•	•	•	•				
n Butyric Acid		•	•	•	•				
Tot. Ferm. Acids (FiM)		•							
Tot. Volatile Fatty Acids			•						
Lactic Acid		•	•	•	•				
Nitrate Nitrogen	•								
Acid Buffering Capacity	•								
NCGD									•

### Dietary minerals

#### Macro Minerals

Phosphorus  
Magnesium  
Calcium  
Sodium  
Potassium  
Chloride  
Cation-Anion Balance

#### Micro Minerals

Manganese  
Copper  
Zinc  
Selenium  
Cobalt  
Iodine

#### Antagonists

Iron  
Aluminium  
Molybdenum  
Sulphur  
Lead

\* Expressed as % of total N

+ Alkalage – Crude Protein & Ammonia by wet chemistry

## Peace of mind

Sciantec remains committed to monitoring the validity of NIR predictions with UKAS accredited wet chemistry analysis. Not only do we continue to monitor and develop our own wet NIR calibrations but we also use the data to monitor the FAA calibrations. As part of the FAA Group, we participate in the Ring Tests and Monthly bias checks for grass and maize silage.

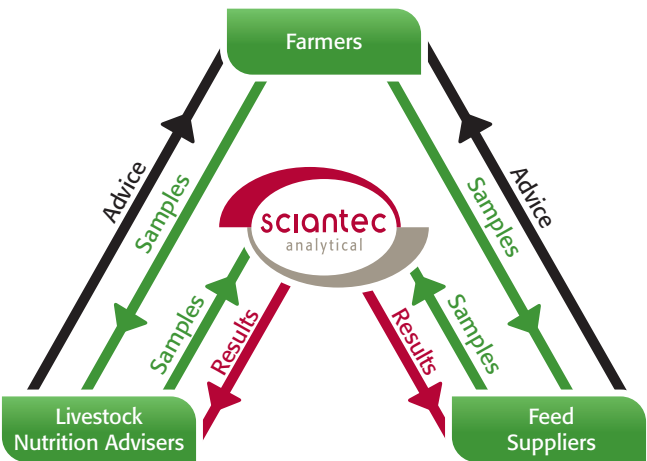
### Grass silage (clamp) analytical ranges

The bars below give an indication of the wide range of test results we regularly find underlying the central role of accurate information in developing balanced livestock nutrition programmes.

Min		Max
15.3	Dry Matter (%)	56.7
10.1	Crude Protein (%)	19.7
9.1	ME (MJ/Kg DM)	12.2
3.5	pH	5.5
1.7	Ammonia-N (% of total N)	20.0
9.2	Lactic Acid (g/Kg)	190

## Unlock the potential

Independent accurate analysis is not an end in itself, but it is central to productive animal nutrition. The numbers we provide to our customers – livestock advisers and nutritionists, feed manufacturers and so on – allow them to develop the very best nutritional advice for their customers – livestock farmers across the UK.



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