

The benefits of Bioparametrics Analytical Service:

- **Accurate parameter estimation**
Our technique generates more data points than in-situ methods thereby increasing accuracy. The protocol ensures batch to batch consistency through the use of blanks, reference samples and a standard density of micro-organisms.
- **Includes Comprehensive Mineral analysis**
- **Accurate performance prediction**
Biopara-Milk evaluates feeds and provides animal response predictions as part of a complete dietary advisory package using the parameter information based on gas runs.
- **More efficient marketing of your feed ingredient**
- **Enables pricing to reflect real feed values**
- **Easy Accessibility**
Biopara-Milk is available under licence enabling nutritionists to provide more accurate information to their clients.

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Bioparametrics evolved out of Edinburgh University to provide a more accurate approach to feed and forage analysis and evaluation.

To know more about feedstuff evaluation and improved ration formulation please contact:

Email: sales@bioparametrics.com

Phone: 44 (0) 131 667 6433

Bioparametrics Ltd • SAC Building • Edinburgh • EH9 3JG
www.bioparametrics.com



Accurate Feed Evaluation Pays Dividends

Bioparametrics offers the Feed Industry:

- Unique assessment of routine and novel feeds
- Better evaluation of feed modifications
- The opportunity to realise higher margins

Our analytical technology uses in vitro gas production to measure the behaviour and digestibility patterns of the carbohydrate and protein fractions in the rumen. Reliable prediction of how a feed ingredient performs in ruminant diets enables nutritionists to evaluate the potential value and marketability of any feed ingredient or modification thereof.

Unique Analytical Technology

We will provide accurate carbohydrate and protein evaluation. Samples are incubated with standardized rumen micro-organisms for seventy two hours. One set measures carbohydrate degradation (WSC, quick starch, other quickly degradable carbohydrate e.g. pectins, slow starch and fermentable NDF), and another measures protein degradation (quick CP and slow CP). Together with proximate analysis of the sample, we can measure the amounts of each of the above, what rates they will ferment at and what lags to fermentation they might have.

A comprehensive mineral analysis, including trace elements, accompanies the Bioparametrics measurements.

Co Products and Additive Efficacy

For efficacy of additives (e.g. enzyme), samples with and without additive are required. We offer the option of adding your new feed ingredient parameters to our extensive database of feed ingredients which is distributed on a regular basis to all **Biopara-Milk** users.

Report and Timescales

Clients are provided with a detailed report as illustrated in the example for sugar beet feed. For a bespoke gas run the analytical report will be provided in about 6 weeks and in approx. 12 weeks for a standard report.

Example - Sugar Beet Feed

Dry Matter (%)	86.6
Ash (% DM)	10.8
Feed Size (1 to 5)	1

Energy

D value (% DM) <i>from gas product</i>	76.1		
ME (MJ/kg DM)	12.2		
FME (MJ/kg DM)	11.9		
Oil (% DM)	0.7		
ADF (% DM)	19.0		
NDF (% DM)	34.0		
Total Starch (% DM)	2.0		
	(% DM)	Rate (/h)	Lag (h)
Sugar	24.2	0.208	
Other Quickly Degraded CHO	23.3	0.107	
Quickly Degraded Starch			
Slowly Degraded Starch	2.0	0.060	1.5
Fermentable NDF	27.3	0.110	3.5

Protein

CP (% DM)	8.2		
	(CP fract)	Rate (/h)	Lag (h)
Quickly Degraded Protein (a)	0.14	0.755	
Slowly Degraded Protein (b)	0.85	0.072	1.4
eRDP at 0.08/h (CP fraction)		0.48	
DUP at 0.08/h (CP fraction)		0.39	
Ammonia (g/kg DM)		Trace	

Fermentation Characteristics

Lactic Acid (% DM)	-
Total Volatile Fatty Acids (% DM)	-
pH	6.1