June 2019

prepASH®

Proficiency tests for Quality Assurance and Analytical Quality Record

VDLUFA Feed Survey 2016

Analytical results of moisture and ash determination with prepASH® in conjunction with participating laboratories (public sector)

Verband Deutscher Landwirtschaftlicher Untersuchungs- und Forschungsanstalten

Bescheinigung

über die Teilnahme an der

VDLUFA Futtermittel Enquete 2016
433 Q Teil B (öffentlicher Bereich)

Hiermit wird bescheinigt, dass das Labor

Precisa Gravimetrics GmbH
Applikationslabor
Bahnhofstraße 106 b
61130 Nidderau

unter der **Labor-Nr.: 91**

an der im Auftrag der Fachgruppe VI (Futtermitteluntersuchung) des VDLUFA durchgeführten Enquete teilgenommen hat.

Durchführung: BfUL, LUFA Sachsen, Nossen
LHL, LUFA Kassel
LUFA Speyer
LfL Bayern, Zentrallabor Grub

Inhalt: Untersuchung von 3 Futtermitteln auf Inhalts- und Zusatzstoffe lt. Anlage

STAATLICHE BETRIEBS-GESELLSCHAFT FÜR UMWELT UND LANDWIRTSCHAFT | Freistaat SACHSEN | Landesbetrieb Hessisches Landeslabor | LUFA Speyer | LfL Bayerische Landesanstalt für Landwirtschaft

Doris Krieg
i.A. der Fachgruppe

Nossen, im Mai 2016

Aim

The VDLUFA regularly carry out feed surveys which serve as a quality assurance for the checking and documentation of analytical standards. The VDLUFA is open to non members and provides an opportunity for public interlaboratory testing.
Using this facility, Precisa Gravimetrics GmbH, a branch of Precisa Gravimetrics AG in Germany, was able to demonstrate that automatic moisture and ash determination with prepASH® achieved excellent results with reduced effort.

Conclusion

The evaluation carried out by the State Operating Society for Environment and Agriculture (BfUL), presented below, confirms both the high accuracy and precision of the prepASH® measurements which were carried out in Precisa's application laboratory in Nidderau near Frankfurt. The results are very close to the total mean (see graphics, Laboratory 91). The scatter of the 4 analytical values is very narrow.

As such, the use of this automatic analysis serves as an optimal alternative for non-automated methods.

All measurements conform to required standards. Please contact us for any additional information you require.

Further reading is available from:

H. Horst: Nachweis der Gleichwertigkeit zweier Analysenverfahren: Bestimmung von Wasser- und Rohaschegehalt, nach dem Methodenbuch III und einem automatisierten Verfahren; www.vdlufa.de; Kongress 2015, Kongressband, S 692.

Sample Material

As part of the VDLUFA Feed Inquiry 433 Q (2016), three samples were provided for examination: two compound feeds, one dairy cattle feed, one mineral feed. For each sample, 4 raw ash results were required calculated on 100% dry matter. In this context, the humidity was determined only for the calculation and not for the overall assessment.

Analytic Conditions - Laboratory 91 with prepASH® (see graphics ↓) Automatic Humidity and Ash Determination

Humidity and crude ash parameters for sample 433Q a, b, c

The samples were analysed with the fully automatic prepASH® drying and ashing system from Precisa. Here, a temperature program of up to 10 freely definable temperature steps can be created. Over the entire measuring time, weighing curves are recorded by the system for each individual sample, thus omitting cooling processes in the desiccator. At the same time, this enables the automatic determination of the constant weight throughout the drying and ashing process. For the analysis according to Regulation (EC) 152_2009; App. III, A, M approx. 2g sample have been weighed and analysed by the following temperature program:

Step 1:	Increase from room temperature to 103°C in 20 min
Step 2:	3 hours drying at 103°C
Step 3:	Automatic determination of constant weight at a level of 1 mg/30 min at 103°C. Switch to step 4 after a maximum of 1 hour.
Step 4:	Increase from 103°C to 550°C in 20 min
Step 5:	Ashing for 2 hours at 550°C
Step 6:	Automatic determination of constant weight at a level of 1 mg/30 min at 550°C. End of step 6 after a maximum of 5 hours

Evaluation

State Operating Society for Environment and Agriculture (BfUL)
Division 6 / Agricultural investigation
Division manager: Dr. Nitzsche

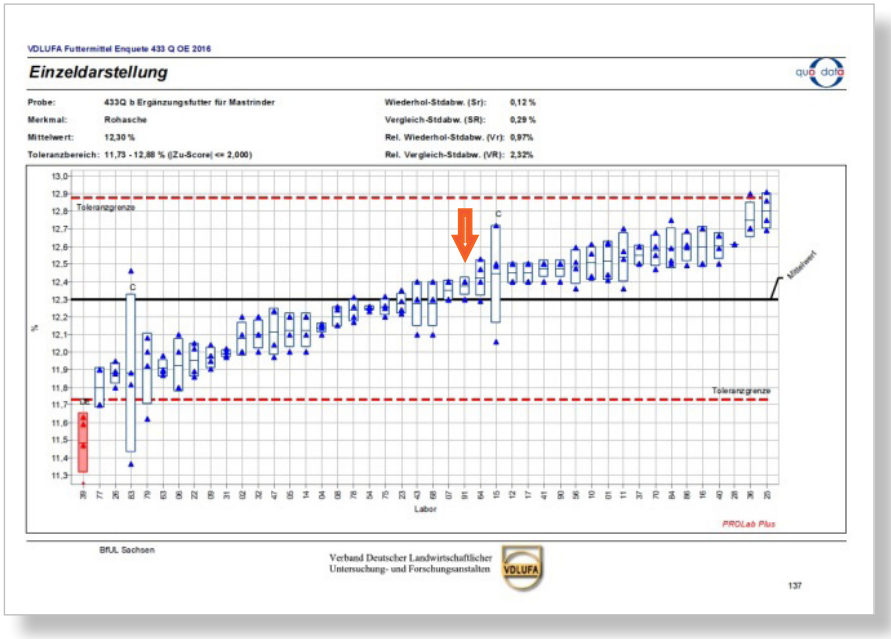
Processors: D. Krieg, S. Seidel, Nossen

Comparative results for the parameters moisture and crude ash of the examination of the public part

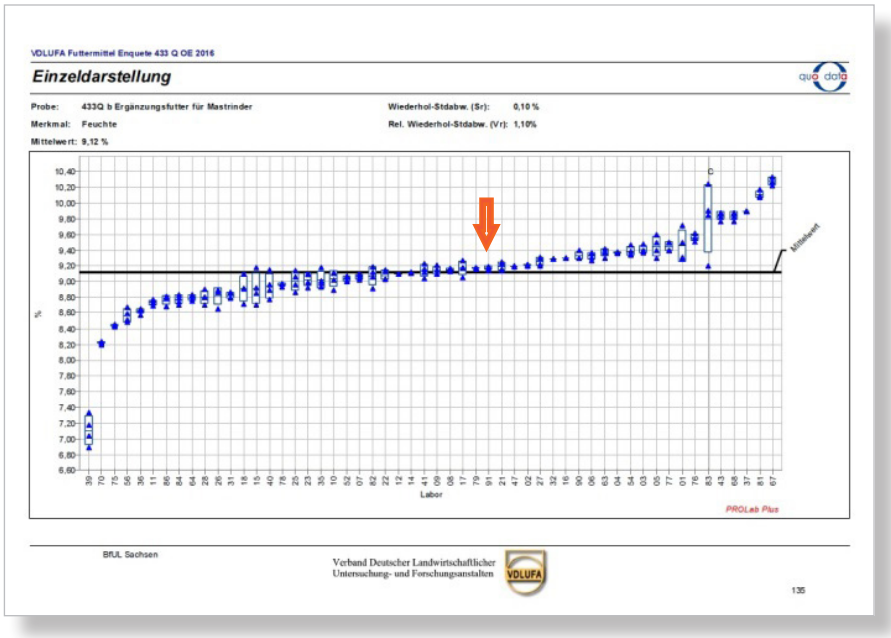
Laboratory 91: Precisa Gravimetrics GmbH – Application laboratory Nidderau

1. Feed supplement for cattle fattening

A: Crude ash



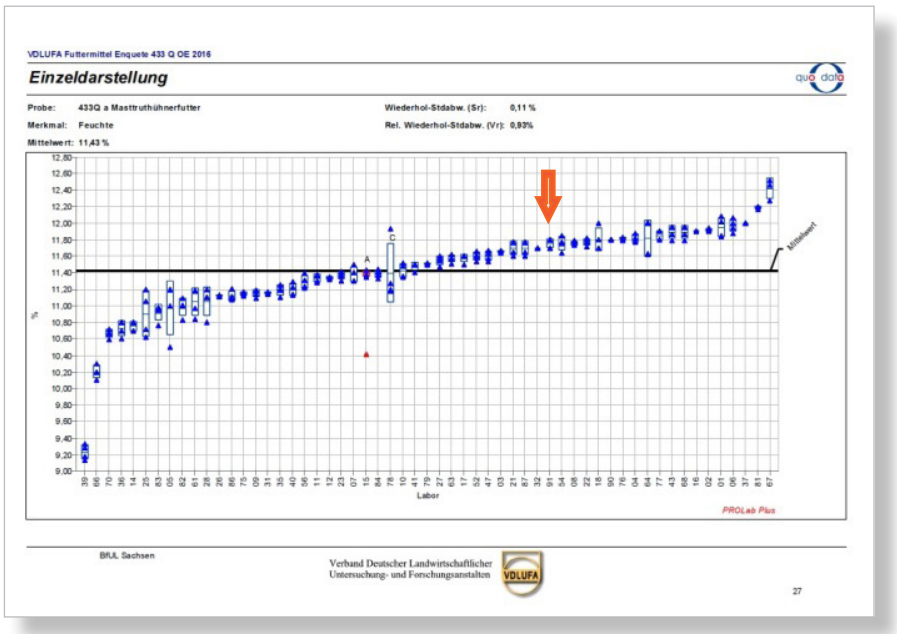
B: Moisture



2. Feed for fattening turkeys

A: Crude ash

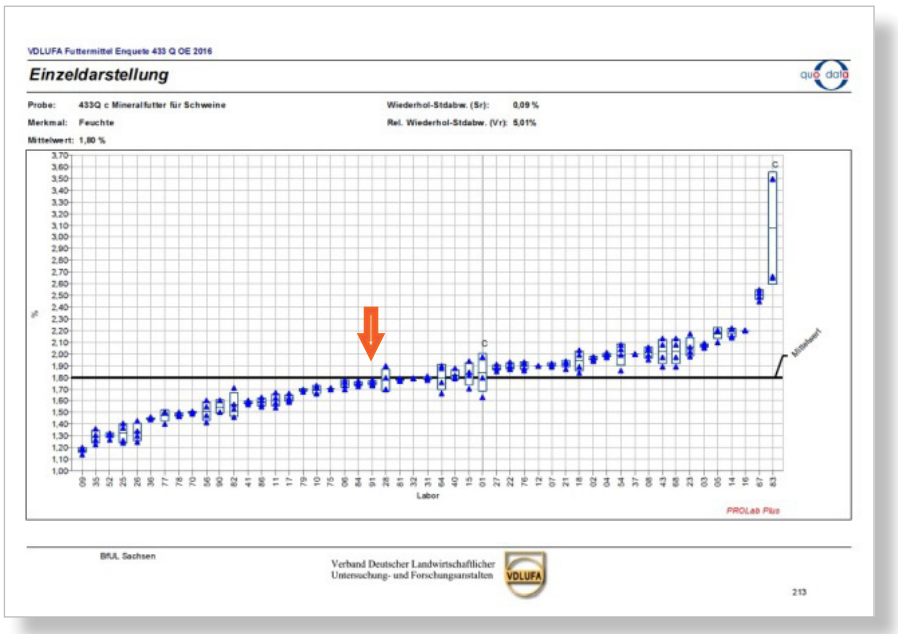
B: Moisture



3. Mineral feed for pigs

A: Crude ash

B: Moisture



Precisa THE BALANCE OF QUALITY

Precisa Gravimetrics AG
Moosmattstrasse 32
CH-8953 Dietikon

Tel +41 44 744 28 28
Fax +41 44 744 28 38
www.precisa.com; info@precisa.ch