Application Note

AN-A-100209-E-01

The sulphur content of Dried Distillers Grains measured with the rapid CS cube

Task

Dried distillers grains (DDG) are a by-product of the distillation process during spirit and bio-fuel production. Distillers grains are an excellent digestible protein and energy source for livestock, especially ruminants. For quality control the sulphur content of DDG is routinely determined.

Specification

	Instrument		Sample
Basis:	rapid CS cube	**Quantity:**	80-100 mg
Mode:	S	**Consistency:**	particulates 1-3 mm
Periphery:	micro balance (readability 0.01 mg)	**Preparation:**	not necessary

Procedure

The samples are weighed into tin boats with an additive of WO_3. For calibration and the daily factor determination sulphanilamide is used.

Each sample has been analysed four times. The average S content of six different dried distillers grains samples including their absolute standard deviations are presented below.

Results

Sample	S [%]
DDG-1	1.064 ± 0.028
DDG-2	1.051 ± 0.037
DDG-3	0.989 ± 0.049
DDG-4	1.057 ± 0.040
DDG-5	1.009 ± 0.036
DDG-6	0.972 ± 0.072

The sulphur content of dried distillers grains could be analysed with the rapid CS cube with a very good precision without any limitations. The fast analysis and easy sample preparation enables the fully automated analyses of up to 60 samples within 5 hours with the rapid S cube.

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