

# DIN EN 17853:2023-06 (E)

## Animal feeding stuff - Methods of sampling and analysis - Determination of intact glucosinolates in feed materials and compound feed by LC-MS/MS

---

<b>Contents</b>		<b>Page</b>
	European foreword .....	4
	Introduction .....	5
1	Scope.....	6
2	Normative references.....	7
3	Terms and definitions .....	7
4	Principle.....	7
5	Reagents.....	7
5.1	Analytical standards.....	7
5.2	Chemicals.....	8
5.3	Standard solutions .....	8
5.4	Reagents.....	11
5.5	Quality control material.....	11
6	Apparatus .....	12
7	Procedure .....	13
7.1	Sample pre-treatment.....	13
7.2	Test portion .....	13
7.2.1	Oilseeds and oilseed products .....	13
7.2.2	Compound feed.....	13
7.3	Extraction .....	13
7.3.1	Oilseeds and oilseed products .....	13
7.3.2	Compound feed.....	13
7.3.3	Recovery sample for compound feed .....	14
7.3.4	Preparation of calibration standards in blank feed extract.....	14
8	LC-MS/MS analysis.....	15
8.1	General.....	15
8.2	Analysis sequence.....	16
8.2.1	Oilseeds and oilseed products .....	16
8.2.2	Compound feed.....	16
9	Evaluation of results .....	17
9.1	Identification .....	17
9.2	Quantification .....	17
9.2.1	General.....	17
9.2.2	Linearity of the calibration curve .....	17
9.2.3	Calculation of the glucosinolate concentration in oilseed or oilseed product .....	17
9.2.4	Calculation of the glucosinolate concentration in compound feed.....	18
9.3	Expression of results .....	19
10	Precision .....	19
10.1	General.....	19
10.2	Repeatability .....	19
10.3	Reproducibility.....	19
11	Test report.....	20

<b>Annex A (informative) Precision data</b> .....	<b>21</b>
<b>Annex B (informative) Example of LC-MS/MS conditions</b> .....	<b>45</b>
<b>B.1 General</b> .....	<b>45</b>
<b>B.2 Chromatographic conditions</b> .....	<b>45</b>
<b>B.3 MS conditions</b> .....	<b>46</b>
<b>Annex C (informative) Examples of chromatograms</b> .....	<b>48</b>
<b>Annex D (informative) Glucosinolate standards from commercial sources</b> .....	<b>50</b>
<b>Bibliography</b> .....	<b>52</b>