

DIN EN ISO 21479:2020-09 (E)

Soil quality - Determination of the effects of pollutants on soil flora - Leaf fatty acid composition of plants to assess soil quality (ISO 21479:2019)

Contents		Page
European foreword		3
Foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms, definitions and abbreviated terms	6
	3.1 Terms and definitions	6
	3.2 Abbreviated terms	7
4	Principle	7
5	Apparatus and reagents	7
	5.1 Apparatus	7
	5.2 Reagents	8
6	Sampling strategies	8
7	Sampling of leaf tissues	8
8	Obtaining, extraction and analyses of FAMES	9
	8.1 Contamination control	9
	8.2 Obtaining and extraction of FAMES from plant leaves	9
	8.3 Analysis of FAMES	9
9	Test report	11
	9.1 A reference to this document, i.e. ISO 21479	11
	9.2 Description of the site and areas analysed	11
	9.3 Leaf sampling	11
	9.4 Fatty acid composition	11
	9.5 Conclusion	11
	Annex A (informative) Results of the ring test	12
	Annex B (informative) Assessment of soil quality by determining the Omega-3 index of <i>Lactuca sativa</i> seedlings grown ex situ under controlled conditions	19
	Annex C (informative) Plant species previously successfully used to assess soils of contaminated sites (organic and/or metals)	21
	Annex D (informative) Variation of the Omega-3 index as function of harvest time, plant size and leaf development	22
	Annex E (informative) Effect of the quantity of foliar tissues on the FAMES composition	24
	Annex F (informative) Example of chromatogram obtained after the FAMES analysis of foliar tissues	25
	Annex G (informative) Recommended mathematical method to rate soils of areas when some sampled plant species are not found in all areas	26
	Bibliography	28