

DIN 54439:2018-03 (E)

Textiles - Methods for the determination of N-N-dimethylacetamide (DMAc) and N,N-dimethylformamide (DMF) in man-made fibres of polyacrylonitrile, polyurethane and aromatic polyamide fibres

Contents

Page

C.2	Apparatus	20
C.3	Procedure	20
C.3.1	Sample preparation	20
C.3.2	Calibration over the entire procedure	21
C.3.3	Calculation of results	21
C.3.4	Conversion of the results	22
Annex D (normative)	Option D -- Extraction of the fibre with methanol -- Suitable for aromatic polyamide (aramide)	23
D.1	Reagents	23
D.2	Apparatus	24
D.3	Procedure	25
D.3.1	Sample preparation	25
D.3.2	Calibration over the entire process	25
D.3.3	Calculation of results	26
D.3.4	Conversion of the results	26
Annex E (informative)	Performance characteristics	27
E.1	Results of interlaboratory test results	27
E.1.1	General	27
E.1.2	Polyacrylonitrile fibre samples	27
E.1.3	Fibre sample from polyurethane (elastane)	29
E.1.4	Fibre sample from aramide	29
E.1.5	Examples of unsuitable methods of sample processing	30
Annex F (normative)	Examples of GC capillary columns	32
Annex G (informative)	Examples of chromatographic conditions	33
G.1	Option A -- Dissolving the fibre in DMSO, GC-NPD with headspace loading	33
G.2	Option B -- Multiple headspace extraction, GC-FID	35
G.3	Option C -- Extraction with water, GC-FID with fluid loading	37
G.4	Option D -- Extraction with methanol in the ultrasonic bath, HPLC with UV detection	38
Bibliography		39