

# ISO 11337:2023-01 (E)

## Plastics - Polyamides - Determination of $\epsilon$ -caprolactam and $\omega$ -laurolactam by gas chromatography

---

Contents		Page
Foreword .....		iv
1 Scope .....	1	1
2 Normative references .....		1
3 Terms and definitions .....		1
4 Method A: Extraction method .....		1
4.1 Principle .....		1
4.2 Reagents .....		1
4.3 Apparatus and materials .....		2
4.4 Preparation of test sample .....		3
4.5 Procedure .....		4
4.5.1 Test portion .....		4
4.5.2 Extraction .....		4
4.5.3 Preparation of internal-standard solution .....		4
4.5.4 Preparation of sample solution .....		4
4.5.5 Preparation of calibration solution .....		4
4.5.6 Gas-chromatographic analysis of sample and calibration solutions .....		4
4.5.7 Evaluation of gas chromatographic peaks .....		5
4.6 Expression of results .....		5
4.7 Precision .....		5
4.8 Test report .....		6
5 Method B: Dissolution method .....		6
5.1 Principle .....		6
5.2 Reagents .....		6
5.3 Apparatus .....		7
5.4 Preparation of internal-standard solutions .....		8
5.4.1 General .....		8
5.4.2 Internal standard for unextracted polyamide 6 .....		8
5.4.3 Internal standard for extracted polyamide 6 .....		8
5.4.4 Internal standard for polyamide 12 .....		8
5.4.5 Preparation of calibration solutions .....		9
5.4.6 Calibration .....		10
5.5 Procedure .....		10
5.5.1 Preparation and injection of sample solution .....		10
5.5.2 Evaluation of gas-chromatographic peaks .....		10
5.5.3 Solvent recovery .....		10
5.6 Expression of results .....		11
5.7 Precision .....		11
5.8 Test report .....		11